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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Paper No. 29

Application Number: 09/134,453  
Filing Date: August 14, 1998  
Appellant(s): GRAFF, RICHARD A.

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GROUP 3600

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Peter K. Trzyna  
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed October 28, 2002.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct. However, the appellant writes that four amendments filed subsequent to the Final Rejection on April 15, 2002, have been graciously entered into the application, but the Final Rejection was actually mailed February 13, 2002, rather than April 15.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) Issues**

The appellant's statement of the issues in the brief is correct.

**(7) Grouping of Claims**

The rejection of claims 64-75 and 80-95 and parallel claims 226-237 and 242-257 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

**(8) Claims Appealed**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) Prior Art of Record**

✓ 5,774,880	GINSBURG	06-1998
✓ 5,101,353	LUPIEN et al.	03-1992
✓ 3,426,676	ZIELKE	02-1969
✓ 8,648,256	PAINE et al.	03-1972
✓ 4,860,238	KRAKER	08-1989
✓ 5,133,480	MATSUMOTO et al.	07-1992
✓ 5,184,232	BURNEY	02-1993
✓ 5,502,778	ISHIKAWA et al.	03-1996

Graff, R.A., "The Impact of Tax Issues on Real Estate Debt and Equity Separation," *Real Estate Review*, Vol. 20, No. 3, pp. 50-58 (1990).

Epstein, L., "Duration Gains Influence as Rates Fall," *Corporate Cashflow*, Vol. 13, No. 5, pp. 50-51 (May 1992).

Coughlan, F., "Financial Add-ins Lighten Load of 1-2-3 Users; Specialized Programs Save Buyers Time, Effort by Cutting Steps out of Complex Calculations," *PC Week*, Vol. 9, No. 38, p. 145 (September 21, 1992).

Mims, F.M., "Analog Computer Techniques for Digital Computers," *Computers and Electronics*, Vol. 22, p. 24 (September, 1984).

Anon., "Research on an Optical-Digital Computer that Would Use Light Beams and Optical Pathways to Replace Electrical Signals and Wires Is Being Performed by S.A. Collins Jr, Prof of Electrical Engineering at Ohio State U," *Industry Week*, p. 42 (May 3, 1982).

Walters, D., "California Tax Board Decides not to Appeal to Supreme Court on Taxing Dividends," *The Bond Buyer*, Vol. 284, No. 27902, p. 3 (June 2, 1988).

Sharp, A.D., "Advising Clients on Municipal Bonds," *National Public Accountant*, Vol. 36, No. 9, pp. 42-44 (September 1991).

Shapiro, L., et al., "Advantages of Active Matrix LCD Technology in Electronic Transparencies" (Abstract only), *Proceedings of the SPIE -- The International Society for Optical Engineering*, Vol. 1664, pp. 150-152 (1992).

✓ Rosenberg, J.M., *Dictionary of Banking and Financial Services*, Second Edition, pages 138, 262, 511, 550, 594, 602 (1985).

✓ Munn, G.G., et al., Encyclopedia of Banking Finance, article on stock exchanges, pages 976-977 (1991).

**(10) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-75, 80-101, 104-180, and 226-257 were rejected under 35 U.S.C.

103(a). This rejection is set forth in prior Office Action, Paper No. 14, and repeated below.

***Response to Challenges of Official Notice***

In rejecting claims 1, 2, 3, and 9 under 35 U.S.C. 103, official notice was taken that it is well known for output means (e.g., printers, monitors, modems) to be electrically connected to computers. This assertion is supported by Shapiro et al. ("Advantages of Active Matrix LCD Technology in Electronic Transparencies"), which discloses an output means electrically connected to a computer, and also by Zielke (U.S. Patent 3,426,676) (see Abstract).

In rejecting claims 1, 2, 3, 9, and 64 under 35 U.S.C. 103, official notice was taken that it is well known to use digital electrical computers to manipulate electrical signals in manipulating data and performing calculations. This assertion is supported by Mims ("Analog Computer Techniques for Digital Computers") (see paragraph beginning "It's well-known that digital computer circuits . . ."), and by the article "Research on an Optical-Digital Computer That Would Use Light Beams and Optical Pathways to

Replace Electrical Signals and Wires Is Being Performed by S.A. Collins Jr, Prof of Electrical Engineering at Ohio State U.," both of which teach the well known, standard methods of computing in the course of disclosing a possible alternative or replacement.

In rejecting claims 1, 2, 3, 9, and 64 under 35 U.S.C. 103, official notice was taken that it is well known to electrically communicate the output of one computer as input to a second computer, which then stores the output in memory. This assertion is supported by Paine et al. (U.S. Patent 3,648,256) (see column 3, lines 18-51), and by Kraker (U.S. Patent 4,860,238) (see column 2, lines 25-50; claims 1 and 2).

In rejecting claims 8, 14, 63, 92-95, and 110-111, the statement was made that Treasury securities are generally exempt from state taxes; municipal bonds are in many cases exempt from federal income tax. Walters ("California Tax Board Decides not to Appeal to Supreme Court on Taxing Dividends") discloses that Treasury securities are often exempt from state taxes. Sharp ("Advising Clients on Municipal Bonds") discloses that municipal bonds are in many cases exempt from federal income tax.

In rejecting claims 57 and 58 under 35 U.S.C. 103, official notice was taken that it is well known for processors to be digital electrical processors, and for data to be converted into electrical signals for use by processors. This assertion is supported by Mims ("Analog Computer Techniques for Digital Computers") (see paragraph beginning "It's well-known that digital computer circuits . . ."), and by the article "Research on an Optical-Digital Computer That Would Use Light Beams and Optical Pathways to Replace Electrical Signals and Wires Is Being Performed by S.A. Collins Jr, Prof of

Electrical Engineering at Ohio State U.," both of which teach the well known, standard methods of computing in the course of disclosing a possible alternative or replacement.

In rejecting claims 57 and 58 under 35 U.S.C. 103, official notice was taken that it is well known for computers to be digital electrical computers controlled by processors, for computers to receive information as digital electrical signals, and for computers to be electrically connected to output means (e.g., printers, modems). The assertion that it is well known for computers to be digital electrical computers controlled by processors is supported by Mims ("Analog Computer Techniques for Digital Computers") (see paragraph beginning "It's well-known that digital computer circuits . . ."), and by the article "Research on an Optical-Digital Computer That Would Use Light Beams and Optical Pathways to Replace Electrical Signals and Wires Is Being Performed by S.A. Collins Jr, Prof of Electrical Engineering at Ohio State U.," both of which teach the well known, standard methods of computing in the course of disclosing a possible alternative or replacement. The assertion that it is well known for computers to receive information as digital electrical signals is supported by Matsumoto et al. (U.S. Patent 5,133,480) (see column 2, line 54, through column 3, line 3), by Burney (U.S. Patent 5,184,232) (see column 5, lines 57-65), and by Ishikawa et al. (U.S. Patent 5,502,778) (see column 1, lines 19-30). The assertion that it is well known for computers to be electrically connected to output means is supported by Shapiro et al. ("Advantages of Active Matrix LCD Technology in Electronic Transparencies"), which discloses an output means electrically connected to a computer, and also by Zielke (U.S. Patent 3,426,676) (see Abstract).



In rejecting claims 76-79, 102, and 103 under 35 U.S.C. 103, official notice was taken that tangible personal property is well known. This assertion is supported by Rosenberg ("Dictionary of Banking and Financial Services"), definition of "personal property" on page 511, and definition of "chose(s) in possession" on page 138.

In rejecting claims 80-83, 104, and 105 under 35 U.S.C. 103, official notice was taken that real estate is well known. This assertion is supported by Rosenberg ("Dictionary of Banking and Financial Services"), definition of "real estate" on page 550.

In rejecting claims 84-87, 106, and 107 under 35 U.S.C. 103, official notice was taken that property not including any securities is well known. This assertion is supported by Rosenberg ("Dictionary of Banking and Financial Services"), definition of "security" (third meaning) on page 594, "real estate" on page 550, and "chose(s) in possession" on page 138.

In rejecting claims 120 and 125 under 35 U.S.C. 103, official notice was taken that (fractional) equity interests are well known. This assertion is supported by Rosenberg ("Dictionary of Banking and Financial Services"), definitions of "shares," "share of stocks," and "shareholder" on page 602.

In rejecting claims 123, 133, 143, 153, 163, and 173 under 35 U.S.C. 103, official notice was taken that it is well known for fractional interests in property to be priced and traded. This assertion is supported by Rosenberg ("Dictionary of Banking and Financial Services"), definitions of "shares," "share of stocks," and "shareholder" on page 602, in combination with Munn et al., article on "stock exchanges" on pages 976-977, and Lupien et al. (U.S. Patent 5,101,353).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Rejections of claims 1, 15, 29, and 43.**

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880). Ginsberg discloses a method for making financial analysis output having a computed market-based valuation for property, the financial analysis output being made by steps including: generating a market-based valuation for the property, wherein the property is from a group consisting of a tax-exempt security and a portfolio of tax-exempt securities, the market-based valuation reflecting at least one from a group consisting of expected return under a performance scenario, a price, and a quantitative description of risk, as part of a financial analysis output (column 4, lines 30-67; column 5, lines 34-63); generating a second market-based valuation reflecting computation of a current market-based yield/discount rate for the property (column 7, line 37, through column 9, line 51); and generating a second financial analysis output, including the second market-based valuation, at an output means (column 9, lines 48-51). Ginsberg does not expressly disclose that the output means is electrically connected to the second digital electrical computer, but official notice is taken that it is well known for output means (e.g., printers, monitors, modems) to be electrically connected to

computers. Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to have the output means electrically connected to the second digital electrical computer, for the obvious advantage of conveniently enabling the second financial analysis output to be output in usable form.

Ginsberg does not expressly disclose controlling a digital electrical computer processor to manipulate electrical signals, but does refer to the use of a processor or processors (for example, page 4, lines 50-54), and official notice is taken that it is well known to use digital electrical computer processors to manipulate electrical signals in manipulating data and performing calculations. Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to use such a computer processor, for the obvious advantage of having data manipulation and calculations performed with standard, widely available, and relatively economical equipment.

Ginsberg does not expressly disclose electronically communicating some of the financial analysis output as input to a second digital electrical computer having a second programmed processor, the second digital electrical computer storing the at least some of the financial analysis output in memory accessible to the second programmed processor, but official notice is taken that it is well known to electronically communicate the output of one computer as input to a second computer, which then stores the output in memory. Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to electronically communicate at least some of the financial analysis output as input to a second computer, and store it in memory

accessible to the second computer's processor, for the obvious advantage of making the information represented by the financial analysis output available for use by the second computer, which might be remote from the first computer, or possess capacities (e.g., greater processing power, access to confidential information) lacking in the first computer.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claim 1 above, and further in view of Epstein ("Duration Gains Influence as Rates Fall"). Ginsberg does not expressly disclose that the step of controlling is carried out with the expected return under a performance scenario as part of the first financial output. However, it is well known to use the expected return under a performance scenario as part of financial analysis, as taught by Epstein (whole article, and in particular the section "Lower Coupons Mean Higher Price Volatility"). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to carry out the step of controlling with the expected return under a performance scenario as part of the first financial analysis output, for the obvious advantage of obtaining estimates of what return could plausibly be expected.

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claim 1 above. Ginsberg discloses that the step of controlling is carried out with the price as part of the first financial analysis output (column 4, lines 30-67; column 5, lines 34-63).

Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claim 1 above, and further in view of Coughlan ("Financial Add-ins Lighten Load of 1-2-3 Users . . ."). Ginsberg does not expressly disclose that the step of controlling is carried out with a quantitative description of risk, but the use of quantitative descriptions of risk in financial analysis is well known, as taught by Coughlan (last six paragraphs in particular). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to carry out the step of controlling with the quantitative description of risk as part of the first financial analysis output, for the obvious advantage of obtaining usable estimates of the risks involved in purchasing an item of property.

**Rejections of claims 2, 16, 30, and 44.**

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) in view of Graff ("The Impact of Tax Issues on Real Estate and Equity Separation"). Ginsberg discloses a method for making financial analysis output having a computed market-based valuation for property, the financial analysis output being made by steps including: generating a market-based valuation for the property, the market-based valuation reflecting at least one from a group consisting of expected return under a performance scenario, a price, and a quantitative description of risk, as part of a financial analysis output (column 4, lines 30-67; column 5, lines 34-63); generating a second market-based valuation reflecting computation of a current market-based yield/discount rate for the property (column 7, line 37, through column 9, line 51);

and generating a second financial analysis output, including the second market-based valuation, at an output means (column 9, lines 48-51). Ginsberg does not disclose that the property does not include any securities; however, it is well known to buy, sell, and analyze properties which are not securities by the usual meaning of the term, and Graff, in particular, teaches applying financial analysis to real estate related assets (see especially pages 51 and 52). Hence, it would have been obvious to one of ordinary skill in the art of finance to apply the method of Ginsberg to property not including any securities, for the obvious advantage of determining the prices at which it would be expected to be profitable to buy or sell such property.

Ginsberg does not expressly disclose that the output means is electrically connected to the second digital electrical computer, but official notice is taken that it is well known for output means (e.g., printers, monitors, modems) to be electrically connected to computers. Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to have the output means electrically connected to the second digital electrical computer, for the obvious advantage of conveniently enabling the second financial analysis output to be output in usable form.

Ginsberg does not expressly disclose controlling a digital electrical computer processor to manipulate electrical signals, but does refer to the use of a processor or processors (for example, page 4, lines 50-54), and official notice is taken that it is well known to use digital electrical computer processors to manipulate electrical signals in manipulating data and performing calculations. Hence, it would have been obvious to

one of ordinary skill in the art of finance at the time of applicant's invention to use such a computer processor, for the obvious advantage of having data manipulation and calculations performed with standard, widely available, and relatively economical equipment.

Ginsberg does not expressly disclose electronically communicating some of the financial analysis output as input to a second digital electrical computer having a second programmed processor, the second digital electrical computer storing the at least some of the financial analysis output in memory accessible to the second programmed processor, but official notice is taken that it is well known to electronically communicate the output of one computer as input to a second computer, which then stores the output in memory. Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to electronically communicate at least some of the financial analysis output as input to a second computer, and store it in memory accessible to the second computer's processor, for the obvious advantage of making the information represented by the financial analysis output available for use by the second computer, which might be remote from the first computer, or possess capacities (e.g., greater processing power, access to confidential information) lacking in the first computer.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) and Graff ("The Impact of Tax issues on Real Estate Debt and Equity Separation") as applied to claim 2 above, and further in view of Epstein ("Duration Gains Influence as Rates Fall"). Ginsberg does not expressly disclose that

the step of controlling is carried out with the expected return under a performance scenario as part of the first financial output. However, it is well known to use the expected return under a performance scenario as part of financial analysis, as taught by Epstein (whole article, and in particular the section "Lower Coupons Mean Higher Price Volatility"). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to carry out the step of controlling with the expected return under a performance scenario as part of the first financial analysis output, for the obvious advantage of obtaining estimates of what return could plausibly be expected.

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) and Graff ("The Impact of Tax Issues on Real Estate Debt and Equity Separation") as applied to claim 2 above. Ginsberg discloses that the step of controlling is carried out with the price as part of the first financial analysis output (column 4, lines 30-67; column 5, lines 34-63).

Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) and Graff ("The Impact of Tax Issues on Real Estate Debt and Equity Separation") as applied to claim 2 above, and further in view of Coughlan ("Financial Add-ins Lighten Load of 1-2-3 Users . . ."). Ginsberg does not expressly disclose that the step of controlling is carried out with a quantitative description of risk, but the use of quantitative descriptions of risk in financial analysis is well known, as taught by Coughlan (last six paragraphs in particular). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to



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carry out the step of controlling with the quantitative description of risk as part of the first financial analysis output, for the obvious advantage of obtaining usable estimates of the risks involved in purchasing an item of property.

**Rejections of claims 3-8, 17-22, 31-36, and 45-50.**

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880). Ginsberg discloses a method for making financial analysis output having a computed market-based valuation for property, the financial analysis output being made by steps including: generating a market-based valuation for the property, wherein the property is from a group consisting of a fixed-income asset and a portfolio of fixed-income assets, the market-based valuation reflecting at least one from a group consisting of expected return under a performance scenario, a price, and a quantitative description of risk, as part of a financial analysis output (column 4, lines 30-67; column 5, lines 34-63); generating a second market-based valuation reflecting computation of a current market-based yield/discount rate for the property (column 7, line 37, through column 9, line 51); and generating a second financial analysis output, including the second market-based valuation, at an output means (column 9, lines 48-51). Ginsberg does not expressly disclose that the output means is electrically connected to the second digital electrical computer, but official notice is taken that it is well known for output means (e.g., printers, monitors, modems) to be electrically connected to computers. Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to have the output means electrically

connected to the second digital electrical computer, for the obvious advantage of conveniently enabling the second financial analysis output to be output in usable form.

Ginsberg does not expressly disclose controlling a digital electrical computer processor to manipulate electrical signals, but does refer to the use of a processor or processors (for example, page 4, lines 50-54), and official notice is taken that it is well known to use digital electrical computer processors to manipulate electrical signals in manipulating data and performing calculations. Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to use such a computer processor, for the obvious advantage of having data manipulation and calculations performed with standard, widely available, and relatively economical equipment.

Ginsberg does not expressly disclose electronically communicating some of the financial analysis output as input to a second digital electrical computer having a second programmed processor, the second digital electrical computer storing the at least some of the financial analysis output in memory accessible to the second programmed processor, but official notice is taken that it is well known to electronically communicate the output of one computer as input to a second computer, which then stores the output in memory. Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to electronically communicate at least some of the financial analysis output as input to a second computer, and store it in memory accessible to the second computer's processor, for the obvious advantage of making the information represented by the financial analysis output available for use by the

second computer, which might be remote from the first computer, or possess capacities (e.g., greater processing power, access to confidential information) lacking in the first computer.

Claims 4, 5, 6, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claim 3 above. As per claim 4, Ginsberg discloses that corporate debt can be at least one of the fixed-income assets (column 1, lines 16-26).

As per claim 5, Ginsberg discloses that a security for debt can be at least one of the fixed-income assets (column 1, lines 16-26).

As per claim 6, Ginsberg discloses that corporate debt can be the debt which is at least one of the fixed-income assets (column 1, lines 16-26).

As per claim 7, Ginsberg discloses that a Treasury security can be at least one of the fixed-income assets (column 1, lines 16-26; column 5, lines 41-56).

As per claim 8, Ginsberg discloses that a tax-exempt security can be at least one of the fixed-income assets (column 1, lines 16-26; column 5, lines 41-56). (Treasury securities are generally exempt from state taxes; municipal bonds are in many cases exempt from federal income tax.)

Claims 17, 18, 19, 20, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claims 3, 4, 5, 6, 7, and 8 above, respectively, and further in view of Epstein ("Duration Gains Influence as Rates Fall"). Ginsberg does not expressly disclose that the step of controlling is carried out with the expected return under a performance scenario as part of the first financial output.

However, it is well known to use the expected return under a performance scenario as part of financial analysis, as taught by Epstein (whole article, and in particular the section "Lower Coupons Mean Higher Price Volatility"). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to carry out the step of controlling with the expected return under a performance scenario as part of the first financial analysis output, for the obvious advantage of obtaining estimates of what return could plausibly be expected.

Claims 31, 32, 33, 34, 35, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claims 3, 4, 5, 6, 7, and 8 above, respectively. Ginsberg discloses that the step of controlling is carried out with the price as part of the first financial analysis output (column 4, lines 30-67; column 5, lines 34-63).

Claims 45, 46, 47, 48, 49, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claim 3, 4, 5, 6, 7, and 8 above, respectively, and further in view of Coughlan ("Financial Add-ins Lighten Load of 1-2-3 Users . . ."). Ginsberg does not expressly disclose that the step of controlling is carried out with a quantitative description of risk, but the use of quantitative descriptions of risk in financial analysis is well known, as taught by Coughlan (last six paragraphs in particular). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to carry out the step of controlling with the quantitative description of risk as part of the first financial analysis output, for the

obvious advantage of obtaining usable estimates of the risks involved in purchasing an item of property.

**Rejections of claims 9-14, 23-28, 37-42, and 51-56.**

Claims 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880). Ginsberg discloses a method for making financial analysis output having a computed market-based valuation for property, the financial analysis output being made by steps including: generating a market-based valuation for the property, wherein the property is a fixed-income asset, the market-based valuation reflecting at least one from a group consisting of expected return under a performance scenario, a price, and a quantitative description of risk, as part of a financial analysis output (column 4, lines 30-67; column 5, lines 34-63); generating a second market-based valuation reflecting computation of a current market-based yield/discount rate for the property (column 7, line 37, through column 9, line 51); and generating a second financial analysis output, including the second market-based valuation, at an output means (column 9, lines 48-51). Ginsberg does not expressly disclose that the output means is electrically connected to the second digital electrical computer, but official notice is taken that it is well known for output means (e.g., printers, monitors, modems) to be electrically connected to computers. Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to have the output means electrically connected to the second digital electrical computer, for the obvious

advantage of conveniently enabling the second financial analysis output to be output in usable form.

Ginsberg does not expressly disclose controlling a digital electrical computer processor to manipulate electrical signals, but does refer to the use of a processor or processors (for example, page 4, lines 50-54), and official notice is taken that it is well known to use digital electrical computer processors to manipulate electrical signals in manipulating data and performing calculations. Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to use such a computer processor, for the obvious advantage of having data manipulation and calculations performed with standard, widely available, and relatively economical equipment.

Ginsberg does not expressly disclose electronically communicating some of the financial analysis output as input to a second digital electrical computer having a second programmed processor, the second digital electrical computer storing the at least some of the financial analysis output in memory accessible to the second programmed processor, but official notice is taken that it is well known to electronically communicate the output of one computer as input to a second computer, which then stores the output in memory. Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to electronically communicate at least some of the financial analysis output as input to a second computer, and store it in memory accessible to the second computer's processor, for the obvious advantage of making the information represented by the financial analysis output available for use by the

second computer, which might be remote from the first computer, or possess capacities (e.g., greater processing power, access to confidential information) lacking in the first computer.

Claims 10, 11, 12, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claim 9 above. As per claim 10, Ginsberg discloses that corporate debt can be the fixed-income asset (column 1, lines 16-26).

As per claim 11, Ginsberg discloses that a security for debt can be the fixed-income asset (column 1, lines 16-26).

As per claim 12, Ginsberg discloses that corporate debt can be the debt which is the fixed-income asset (column 1, lines 16-26).

As per claim 13, Ginsberg discloses that a Treasury security can be the fixed-income asset (column 1, lines 16-26; column 5, lines 41-56).

As per claim 14, Ginsberg discloses that a tax-exempt security can be the fixed-income asset (column 1, lines 16-26; column 5, lines 41-56). (Treasury securities are generally exempt from state taxes; municipal bonds are in many cases exempt from federal income tax.)

Claims 23, 24, 25, 26, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claims 9, 10, 11, 12, 13, and 14 above, respectively, and further in view of Epstein ("Duration Gains Influence as Rates Fall"). Ginsberg does not expressly disclose that the step of controlling is carried out with the expected return under a performance scenario as part of the first financial

output. However, it is well known to use the expected return under a performance scenario as part of financial analysis, as taught by Epstein (whole article, and in particular the section "Lower Coupons Mean Higher Price Volatility"). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to carry out the step of controlling with the expected return under a performance scenario as part of the first financial analysis output, for the obvious advantage of obtaining estimates of what return could plausibly be expected.

Claims 37, 38, 39, 40, 41, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claims 9, 10, 11, 12, 13, and 14 above, respectively. Ginsberg discloses that the step of controlling is carried out with the price as part of the first financial analysis output (column 4, lines 30-67; column 5, lines 34-63).

Claims 51, 52, 53, 54, 55, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claims 9, 10, 11, 12, 13, and 14 above, respectively, and further in view of Coughlan ("Financial Add-ins Lighten Load of 1-2-3 Users . . ."). Ginsberg does not expressly disclose that the step of controlling is carried out with a quantitative description of risk, but the use of quantitative descriptions of risk in financial analysis is well known, as taught by Coughlan (last six paragraphs in particular). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to carry out the step of controlling with the quantitative description of risk as part of the first financial analysis output, for the



obvious advantage of obtaining usable estimates of the risks involved in purchasing an item of property.

**Rejection of claim 57.**

Claim 57 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) in view of Lupien et al. (5,101,353). Ginsberg discloses a method for making financial analysis output including a system-determined purchase price for property in consummating a sale, the financial analysis output being made by steps including: providing a processor to receive input signals (column 4, lines 30-39) and connected to an output means (column 9, lines 45-51); controlling a processor to compute the system-determined purchase price for the property in consummating a sale (column 9, line 45, through column 10, line 7); and generating the financial analysis output (column 9, line 45, through column 10, line 7). Ginsberg does not disclose generating the financial output including an offering memorandum at an output means, but Lupien teaches generating the financial analysis output including an offering memorandum at an output means (column 3, lines 15-42; column 3, lines 56-62; column 5, lines 7-15). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to generate financial analysis output including an offering memorandum at the output means, for the obvious advantage of profiting by the purchase or sale of property.

Ginsberg does not expressly disclose converting input data representing the property, including at least one security, into input digital electrical signals representing

the input data. However, Ginsberg discloses collecting data representing property, including at least one security, for use by a processor (column 4, lines 30-49: see also column 5, lines 34-63 for securities), and official notice is taken that it is well known for processors to be digital electrical processors, and for data to be converted into electrical signals for use by processors. Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to convert input data representing the property, including at least one security, into input digital electrical signals representing the input data, for the obvious advantage of making the input data available for use by standard and widely available computers.

Likewise, Ginsberg does not expressly disclose providing a digital electrical computer system controlled by a processor electrically connected to receive input digital electrical signals and electrically connected to an output means, but official notice is taken that it is well known for computers to be digital electrical computers controlled by processors, for computers to receive information as digital electrical signals, and for computers to be electrically connected to output means (e.g., printers, modems). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to have the computers involved in the system be digital electrical computers, electrically connected to receive digital electrical signals, and electrically connected to output means, for the obvious advantage of having data manipulation and calculations performed with standard, widely available, and relatively economical equipment.

**Rejections of claims 58-63.**

Claim 58 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) in view of Lupien et al. (5,101,353). Ginsberg discloses a method for making financial analysis output including a system-determined purchase price for property in consummating a sale, the financial analysis output being made by steps including: providing a processor to receive input signals (column 4, lines 30-39) and connected to an output means (column 9, lines 45-51); controlling a processor to compute the system-determined purchase price for the property in consummating a sale (column 9, line 45, through column 10, line 7); and generating the financial analysis output (column 9, line 45, through column 10, line 7). Ginsberg does not disclose generating the financial output including an offering memorandum at an output means, but Lupien teaches generating the financial analysis output including an offering memorandum at an output means (column 3, lines 15-42; column 3, lines 56-62; column 5, lines 7-15). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to generate financial analysis output including an offering memorandum at the output means, for the obvious advantage of profiting by the purchase or sale of property.

Ginsberg does not expressly disclose converting input data representing the property, wherein the property includes a fixed-income asset, into input digital electrical signals representing the input data. However, Ginsberg discloses collecting data representing property, including a fixed-income asset, for use by a processor (column 4, lines 30-49; see also column 5, lines 34-63 for fixed-income assets), and official notice

is taken that it is well known for processors to be digital electrical processors, and for data to be converted into electrical signals for use by processors. Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to convert input data representing the property, including at least one security, into input digital electrical signals representing the input data, for the obvious advantage of making the input data available for use by standard and widely available computers.

Likewise, Ginsberg does not expressly disclose providing a digital electrical computer system controlled by a processor electrically connected to receive input digital electrical signals and electrically connected to an output means, but official notice is taken that it is well known for computers to be digital electrical computers controlled by processors, for computers to receive information as digital electrical signals, and for computers to be electrically connected to output means (e.g., printers, modems). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to have the computers involved in the system be digital electrical computers, electrically connected to receive digital electrical signals, and electrically connected to output means, for the obvious advantage of having data manipulation and calculations performed with standard, widely available, and relatively economical equipment.

Claims 59, 60, 61, 62, and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) and Lupien (5,101,353) as applied to claim 3 above. As per claim 59, Ginsberg discloses that corporate debt can be a fixed-income asset (column 1, lines 16-26).

As per claim 60, Ginsberg discloses that a security for debt can be a fixed-income asset (column 1, lines 16-26).

As per claim 61, Ginsberg discloses that corporate debt can be the debt which is a fixed-income asset (column 1, lines 16-26).

As per claim 62, Ginsberg discloses that a Treasury security can be the fixed-income asset (column 1, lines 16-26; column 5, lines 41-56).

As per claim 63, Ginsberg discloses that a tax-exempt security can be the fixed-income asset (column 1, lines 16-26; column 5, lines 41-56). (Treasury securities are generally exempt from state taxes; municipal bonds are in many cases exempt from federal income tax.)

**Rejections of claims 64-180.**

Claim 64 rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880). Ginsberg discloses a method for making financial analysis output having a system-determined purchase price for property, the financial analysis output being made by steps including: generating a market-based valuation for the property, the valuation reflecting at least one from a group consisting of expected return under a performance scenario, a price, and a quantitative description of risk, as part of a financial analysis output (column 4, lines 30-67; column 5, lines 34-63); and generating a financial analysis output having the system-determined purchase price for the property in consummating the sale (column 9, line 45, through column 10, line 7).

Ginsberg does not expressly disclose controlling a digital electrical computer processor to manipulate electrical signals, but does refer to the use of a processor or processors (for example, page 4, lines 50-54), and official notice is taken that it is well known to use digital electrical computer processors to manipulate electrical signals in manipulating data and performing calculations. Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to use such a computer processor, for the obvious advantage of having data manipulation and calculations performed with standard, widely available, and relatively economical equipment.

Ginsberg does not expressly disclose electronically communicating at least some of the financial analysis output as input to a second digital electrical computer having a programmed processor, the second digital electrical computer storing the at least some of the financial analysis output in memory accessible to the second programmed processor, but official notice is taken that it is well known to electronically communicate the output of one computer as input to a second computer, which then stores the output in memory. Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to electronically communicate at least some of the financial analysis output as input to a second computer, and store it in memory accessible to the second computer's processor, for the obvious advantage of making the information represented by the financial analysis output available for use by the second computer, which might be remote from the first computer, or possess capacities

(e.g., greater processing power, access to confidential information) lacking in the first computer.

Claim 65 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claim 64 above, and further in view of Epstein ("Duration Gains Influence as Rates Fall"). Ginsberg does not expressly disclose that the step of controlling is carried out with the expected return under a performance scenario as part of the first financial output. However, it is well known to use the expected return under a performance scenario as part of financial analysis, as taught by Epstein (whole article, and in particular the section "Lower Coupons Mean Higher Price Volatility"). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to carry out the step of controlling with the expected return under a performance scenario as part of the first financial analysis output, for the obvious advantage of obtaining estimates of what return could plausibly be expected.

Claim 66 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claim 64 above. Ginsberg discloses that the step of controlling is carried out with the price as part of the first financial analysis output (column 4, lines 30-67; column 5, lines 34-63).

Claim 67 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claim 64 above, and further in view of Coughlan ("Financial Add-ins Lighten Load of 1-2-3 Users . . ."). Ginsberg does not expressly disclose that the step of controlling is carried out with a quantitative description of risk,

but the use of quantitative descriptions of risk in financial analysis is well known, as taught by Coughlan (last six paragraphs in particular). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to carry out the step of controlling with the quantitative description of risk as part of the first financial analysis output, for the obvious advantage of obtaining usable estimates of the risks involved in purchasing an item of property.

Claims 68-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claims 64-67 above, respectively, and also in view of Epstein (as per claim 65 and hence claim 69) and Coughlan (as per claim 67 and hence claim 71). Ginsberg discloses that corporate debt can be property in the field of his invention (column 1, lines 16-26).

Claims 72-75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claims 64-67 above, respectively, and also in view of Epstein (as per claim 65 and hence claim 73) and Coughlan (as per claim 67 and hence claim 75). Ginsberg discloses that corporate debt can be property in the field of his invention (column 1, lines 16-26).

Claims 80-83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claims 64-67 above, respectively, and also in view of Epstein (as per claim 65 and hence claim 81) and Coughlan (as per claim 67 and hence claim 83). Ginsberg does not disclose that the property is real estate, but official notice is taken that real estate is well known. Real estate, like the Treasury notes of Ginsberg's patent, can be bought, sold, rented, etc. Hence, it would have been obvious



to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's method for valuing securities to real estate. for the obvious advantage of determining at what prices it would be profitable to buy or sell real estate.

Claims 84-87 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claims 64-67 above, respectively, and also in view of Epstein (as per claim 65 and hence claim 85) and Coughlan (as per claim 67 and hence claim 87). Ginsberg does not disclose that the property is property not including any securities, but official notice is taken that property not including any securities is well known. Property not including any securities, like the Treasury notes of Ginsberg's patent, can be bought, sold, rented, etc. (Real estate, cars and furniture, for example, are fairly often rented as well as sold outright). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's method for valuing securities to property other than securities, for the obvious advantage of determining at what prices it would be profitable to buy or sell property not including any securities.

Claims 88-91 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claims 64-67 above, respectively, and also in view of Epstein (as per claim 65 and hence claim 89) and Coughlan (as per claim 67 and hence claim 91). Ginsberg discloses that the property can be a fixed-income asset (column 1, lines 16-26).

Claims 92-95 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claims 64-67 above, respectively, and also in view of

Epstein (as per claim 65 and hence claim 93) and Coughlan (as per claim 67 and hence claim 95). Ginsberg discloses that the property can be a fixed-income asset (column 1, lines 16-26), and some of the fixed-income assets disclosed by Ginsberg are tax-exempt fixed-income assets. (Income from Treasury bonds is generally exempt from state income tax; income from municipal bonds is often exempt from federal income tax.)

Claim 96 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claim 64 above, and further in view of Coughlan ("Financial Add-ins Lighten Load of 1-2-3 Users . . ."). Ginsberg discloses that the valuation reflects price (column 4, lines 30-67; column 5, lines 34-63). Ginsberg does not expressly disclose that the valuation also reflects a quantitative description of risk, but it is well known for a valuation to reflect a quantitative description of risk, as taught, for example, by Coughlan (last six paragraphs, in particular). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to carry out the step of controlling with the quantitative description of risk as part of the first financial analysis output, for the obvious advantage of obtaining usable estimates of the risks involved in purchasing an item of property.

Claim 97 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) and Coughlan ("Financial Add-ins Lighten Load of 1-2-3 Users . . .") as applied to claim 96 above. Ginsberg discloses by implication that the valuation reflects a risk-free rate, inasmuch as Ginsberg does not disclose taking a non-zero risk into account. Ginsberg discloses the application of his invention to U.S. Treasury notes

in particular (column 5, lines 34-63), and Treasury notes are generally considered risk-free, or as nearly so as any securities in the world.

Claims 98 and 99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) and Coughlan ("Financial Add-ins Lighten Load of 1-2-3 Users . . .") as applied to claims 96 and 97 above, respectively. Ginsberg discloses that property can be a security for corporate debt (column 1, lines 16-26).

Claims 100 and 101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) and Coughlan ("Financial Add-ins Lighten Load of 1-2-3 Users . . .") as applied to claims 96 and 97 above, respectively. Ginsberg discloses that property can be corporate debt (column 1, lines 16-26).

Claims 104 and 105 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) and Coughlan ("Financial Add-ins Lighten Load of 1-2-3 Users . . .") as applied to claims 96 and 97 above, respectively. Ginsberg does not disclose that the property is real estate, but official notice is taken that real estate is well known. Real estate, like the Treasury notes of Ginsberg's patent, can be bought, sold, rented, etc. Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's method for valuing securities to real estate, for the obvious advantage of determining at what prices it would be profitable to buy or sell real estate.

Claims 106 and 107 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) and Coughlan ("Financial Add-ins Lighten Load of 1-2-3 Users . . .") as applied to claims 96 and 97 above, respectively. Ginsberg does not

disclose that the property is property not including any securities, but official notice is taken that property not including any securities is well known. Property not including any securities, like the Treasury notes of Ginsberg's patent, can be bought, sold, rented, etc. (Real estate, cars and furniture, for example, are fairly often rented as well as sold outright). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's method for valuing securities to property other than securities, for the obvious advantage of determining at what prices it would be profitable to buy or sell property not including any securities.

Claims 108 and 109 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) and Coughlan ("Financial Add-ins Lighten Load of 1-2-3 Users . . .") as applied to claims 96 and 97 above, respectively. Ginsberg discloses that the property can be a fixed-income asset (column 1, lines 16-26; column 4, lines 30-67).

Claims 110 and 111 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) and Coughlan ("Financial Add-ins Lighten Load of 1-2-3 Users . . .") as applied to claims 96 and 97 above, respectively. Ginsberg discloses that the property can be a fixed-income asset, including a Treasury note or municipal bond (column 1, lines 16-26; column 4, lines 30-67; column 5, lines 34-63). Income from Treasury bonds is generally exempt from state income tax; income from municipal bonds is often exempt from federal income tax.

Claims 112-115 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claims 64-67 above, respectively, and also in view of Epstein (as per claim 65 and hence claim 113) and Coughlan (as per claim 67 and

hence claim 115). Ginsberg discloses that the property can be at least one security (column 1, lines 16-26).

Claims 116 and 117 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) and Coughlan ("Financial Add-ins Lighten Load of 1-2-3 Users . . .") as applied to claims 96 and 97 above, respectively. Ginsberg discloses that the property can be at least one security (column 1, lines 16-26).

Claim 118 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claim 64 above, and further in view of Graff ("The Impact of Tax Issues on Real Estate Debt and Equity Separation"). Ginsberg does not disclose that the property is a component of temporally decomposed property, but Graff teaches the temporal decomposition of property (pages 50-52, for example). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's method of financial analysis to a component of temporally decomposed property, for the obvious advantage of determining at what prices it would be profitable to buy or sell a component of temporally decomposed property.

Claims 119-122 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg and Graff as applied to claim 118 above. As per claim 119, Graff teaches that a remainder (residual) interest is part of temporally decomposed property (page 53). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's method of financial analysis to a remainder interest in temporally decomposed property, for the obvious advantage of

determining at what prices it would be profitable to buy or sell a remainder interest in temporally decomposed property.

As per claim 120, Graff teaches that a remainder (residual) interest is part of temporally decomposed property (page 53). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's method of financial analysis to a remainder interest in temporally decomposed property, for the obvious advantage of determining at what prices it would be profitable to buy or sell a remainder interest in temporally decomposed property.

Graff does not expressly teach equity interests in remainder interests (excepting the case of the 100% equity interest). However, official notice is taken that (fractional) equity interests are well known; e.g., shares of corporate stock are equity interests in corporations; there are also equity interests in non-incorporated partnerships. Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's invention to an equity interest in a remainder interest, for the obvious advantage of pricing and trading interests smaller and more conveniently purchasable than the whole value of the remainder interest in a temporally decomposed property.

As per claim 121, Ginsberg does not disclose an estate for years interest, but Graff teaches this (page 53). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's method of financial analysis to an estate for years interest in temporally decomposed property, for

the obvious advantage of determining at what prices it would be profitable to buy or sell an estate for years interest in temporally decomposed property.

As per claim 122, Ginsberg does not disclose a term of years interest, but Graff teaches this (page 53). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's method of financial analysis to a term of years interest in temporally decomposed property, for the obvious advantage of determining at what prices it would be profitable to buy or sell a term of years interest in temporally decomposed property.

Claim 123 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claim 64 above, and further in view of Graff ("The Impact of Tax Issues on Real Estate Debt and Equity Separation"). Ginsberg does not disclose that the property is a fractional interest in a component of temporally decomposed property. However, Graff discloses components of temporally decomposed property (pages 50-52). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's method of financial analysis to a component of temporally decomposed property, for the obvious advantage of determining at what prices it would be profitable to buy or sell a component of temporally decomposed property.

Graff does not disclose fractional interests in components of temporally decomposed property, but official notice is taken that it is well known for fractional interests in property to be priced and traded. Shares of stock, for example, are fractional interests in corporations. Hence, it would have been obvious to one of

ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's invention to a fractional interest in a component of temporally decomposed property, for the obvious advantage of pricing and trading interests smaller and more conveniently purchasable than the whole value of a component of a temporally decomposed property.

Claims 124-127 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) and Graff ("The Impact of Tax Issues on Real Estate Debt and Equity Separation") as applied to claim 123 above. As per claim 124, Graff teaches that one component of a temporally decomposed property is a remainder (residual) interest (page 53). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply the method of financial analysis to a remainder interest, for the obvious advantage of determining at what prices it would be profitable to buy or sell a remainder interest.

As per claim 125, Graff does not expressly teach equity interests in remainder interests (excepting the case of the 100% equity interest). However, official notice is taken that (fractional) equity interests are well known; e.g., shares of corporate stock are equity interests in corporations; there are also equity interests in non-incorporated partnerships. Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's invention to an equity interest in a remainder interest, for the obvious advantage of pricing and trading interests smaller and more conveniently purchasable than the whole value of the remainder interest in a temporally decomposed property.



As per claim 126, Graff teaches an estate for years interest (page 53). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's method of financial analysis to an estate for years interest in temporally decomposed property, for the obvious advantage of determining at what prices it would be profitable to buy or sell an estate for years interest in temporally decomposed property.

As per claim 127, Graff teaches a term of years interest (page 53). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's method of financial analysis to a term of years interest in temporally decomposed property, for the obvious advantage of determining at what prices it would be profitable to buy or sell a term of years interest in temporally decomposed property.

Claim 128 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) and Epstein ("Duration Gains Influence as Rates Fall") as applied to claim 65 above, and further in view of Graff ("The Impact of Tax Issues on Real Estate Debt and Equity Separation"). Ginsberg does not disclose that the property is a component of temporally decomposed property, but Graff teaches the temporal decomposition of property into components (pages 50-52). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's method of financial analysis to a component of temporally decomposed property, for the obvious advantage of determining at what prices it would be profitable to buy or sell a component of temporally decomposed property.

Claims 129-132 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg, Epstein, and Graff as applied to claim 128 above. Claims 129-132 closely parallel claims 124-127, respectively, and are therefore rejected on essentially the same grounds set forth above in rejecting claims 124-127.

Claim 133 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) and Epstein ("Duration Gains Influence as Rates Fall") as applied to claim 65 above, and further in view of Graff ("The Impact of Tax Issues on Real Estate Debt and Equity Separation"). Ginsberg does not disclose that the property is a component of temporally decomposed property, but Graff teaches the temporal decomposition of property into components (pages 50-52). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's method of financial analysis to a component of temporally decomposed property, for the obvious advantage of determining at what prices it would be profitable to buy or sell a component of temporally decomposed property.

Graff does not disclose fractional interests in components of temporally decomposed property, but official notice is taken that it is well known for fractional interests in property to be priced and traded. Shares of stock, for example, are fractional interests in corporations. Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's invention to a fractional interest in a component of temporally decomposed property, for the obvious advantage of pricing and trading interests smaller and more conveniently

purchasable than the whole value of a component of a temporally decomposed property.

Claims 134-137 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg, Epstein, and Graff as applied to claim 133 above. Claims 134-137 closely parallel claims 124-127, respectively, and are therefore rejected on essentially the same grounds set forth above in rejecting claims 124-127.

Claim 138 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claim 66 above, and further in view of Graff ("The Impact of Tax Issues on Real Estate Debt and Equity Separation"). Ginsberg does not disclose that the property is a component of temporally decomposed property, but Graff teaches the temporal decomposition of property into components (pages 50-52). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's method of financial analysis to a component of temporally decomposed property, for the obvious advantage of determining at what prices it would be profitable to buy or sell a component of temporally decomposed property.

Claims 139-142 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg and Graff as applied to claim 138 above. Claims 139-142 closely parallel claims 124-127, respectively, and are therefore rejected on essentially the same grounds set forth above in rejecting claims 124-127.

Claim 143 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) as applied to claim 66 above, and further in view of Graff ("The

Impact of Tax Issues on Real Estate Debt and Equity Separation"). Ginsberg does not disclose that the property is a component of temporally decomposed property, but Graff teaches the temporal decomposition of property into components (pages 50-52). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's method of financial analysis to a component of temporally decomposed property, for the obvious advantage of determining at what prices it would be profitable to buy or sell a component of temporally decomposed property.

Graff does not disclose fractional interests in components of temporally decomposed property, but official notice is taken that it is well known for fractional interests in property to be priced and traded. Shares of stock, for example, are fractional interests in corporations. Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's invention to a fractional interest in a component of temporally decomposed property, for the obvious advantage of pricing and trading interests smaller and more conveniently purchasable than the whole value of a component of a temporally decomposed property.

Claim 144-147 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg and Graff as applied to claim 143 above. Claims 144-147 closely parallel claims 124-127, respectively, and are therefore rejected on essentially the same grounds set forth above in rejecting claims 124-127.

Claim 148 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) and Coughlan ("Financial Add-ins Lighten Load of 1-2-3 Users . . .") as applied to claim 67 above, and further in view of Graff ("The Impact of Tax Issues on Real Estate Debt and Equity Separation"). Ginsberg does not disclose that the property is a component of temporally decomposed property, but Graff teaches the temporal decomposition of property into components (pages 50-52). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's method of financial analysis to a component of temporally decomposed property, for the obvious advantage of determining at what prices it would be profitable to buy or sell a component of temporally decomposed property.

Claims 149-152 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg and Graff as applied to claim 148 above. Claims 149-152 closely parallel claims 124-127, respectively, and are therefore rejected on essentially the same grounds set forth above in rejecting claims 124-127.

Claim 153 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) and Coughlan ("Financial Add-ins Lighten Load of 1-2-3 Users . . .") as applied to claim 67 above, and further in view of Graff ("The Impact of Tax Issues on Real Estate Debt and Equity Separation"). Ginsberg does not disclose that the property is a component of temporally decomposed property, but Graff teaches the temporal decomposition of property into components (pages 50-52). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's method of financial analysis to a component of temporally

decomposed property, for the obvious advantage of determining at what prices it would be profitable to buy or sell a component of temporally decomposed property.

Graff does not disclose fractional interests in components of temporally decomposed property, but official notice is taken that it is well known for fractional interests in property to be priced and traded. Shares of stock, for example, are fractional interests in corporations. Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's invention to a fractional interest in a component of temporally decomposed property, for the obvious advantage of pricing and trading interests smaller and more conveniently purchasable than the whole value of a component of a temporally decomposed property.

Claims 154-157 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg, Coughlan, and Graff as applied to claim 153 above. Claims 154-157 closely parallel claims 124-127, respectively, and are therefore rejected on essentially the same grounds set forth above in rejecting claims 124-127.

Claim 158 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880) and Coughlan ("Financial Add-ins Lighten Load of 1-2-3 Users . . .") as applied to claim 96 above, and further in view of Graff ("The Impact of Tax Issues on Real Estate Debt and Equity Separation"). Ginsberg does not disclose that the property is a component of temporally decomposed property, but Graff teaches the temporal decomposition of property (pages 50-52, for example). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's

invention to apply Ginsberg's method of financial analysis to a component of temporally decomposed property. for the obvious advantage of determining at what prices it would be profitable to buy or sell a component of temporally decomposed property.

Claim 159-162 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg, Coughlan, and Graff as applied to claim 158 above. Claims 159-162 closely parallel claims 124-127, respectively, and are therefore rejected on essentially the same grounds set forth above in rejecting claims 124-127.

Claim 163 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,744,880) and Coughlan ("Financial Add-ins Lighten Load of 1-2-3 Users . . .") as applied to claim 96 above, and further in view of Graff ("The Impact of Tax Issues on Real Estate Debt and Equity Separation"). Ginsberg does not disclose that the property is a component of temporally decomposed property, but Graff teaches the temporal decomposition of property (pages 50-52, for example). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's method of financial analysis to a component of temporally decomposed property, for the obvious advantage of determining at what prices it would be profitable to buy or sell a component of temporally decomposed property.

Graff does not disclose fractional interests in components of temporally decomposed property, but official notice is taken that it is well known for fractional interests in property to be priced and traded. Shares of stock, for example, are fractional interests in corporations. Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's

invention to a fractional interest in a component of temporally decomposed property, for the obvious advantage of pricing and trading interests smaller and more conveniently purchasable than the whole value of a component of a temporally decomposed property. Claims 164-167 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg, Coughlan, and Graff as applied to claim 163 above. Claims 164-167 closely parallel claims 124-127, respectively, and are therefore rejected on essentially the same grounds set forth above in rejecting claims 124-127.

Claim 168 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,744,880) and Coughlan ("Financial Add-ins Lighten Load of 1-2-3 Users . . .") as applied to claim 97 above, and further in view of Graff ("The Impact of Tax Issues on Real Estate Debt and Equity Separation"). Ginsberg does not disclose that the property is a component of temporally decomposed property, but Graff teaches the temporal decomposition of property (pages 50-52, for example). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's method of financial analysis to a component of temporally decomposed property, for the obvious advantage of determining at what prices it would be profitable to buy or sell a component of temporally decomposed property.

Claims 169-172 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg, Coughlan, and Graff as applied to claim 168 above. Claims 169-172 closely parallel claims 124-127, respectively, and are therefore rejected on essentially the same grounds set forth above in rejecting claims 124-127.



Claim 173 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,744,880) and Coughlan ("Financial Add-ins Lighten Load of 1-2-3 Users . . .") as applied to claim 97 above, and further in view of Graff ("The Impact of Tax Issues on Real Estate Debt and Equity Separation"). Ginsberg does not disclose that the property is a component of temporally decomposed property, but Graff teaches the temporal decomposition of property (pages 50-52, for example). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's method of financial analysis to a component of temporally decomposed property, for the obvious advantage of determining at what prices it would be profitable to buy or sell a component of temporally decomposed property.

Graff does not disclose fractional interests in components of temporally decomposed property, but official notice is taken that it is well known for fractional interests in property to be priced and traded. Shares of stock, for example, are fractional interests in corporations. Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to apply Ginsberg's invention to a fractional interest in a component of temporally decomposed property, for the obvious advantage of pricing and trading interests smaller and more conveniently purchasable than the whole value of a component of a temporally decomposed property.

Claims 174-177 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg, Coughlan, and Graff as applied to claim 173 above. Claims 174-177 closely

parallel claims 124-127, respectively, and are therefore rejected on essentially the same grounds set forth above in rejecting claims 124-127.

Claim 178 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,744,880) variously combined with Epstein, Coughlan, and Graff as applied to claims 64-177 above. Ginsberg discloses consummating the sale through a financial exchange (column 9, line 45, through column 10, line 7).

Claim 179 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,744,880) variously combined with Epstein, Coughlan, and Graff as applied to claims 64-117 above. Ginsberg does not disclose that the property is a component of an other property, but Graff ("The Impact of Tax Issues on Real Estate Debt and Equity Separation") teaches having a property be a component of an other property (pages 50-53). Hence, it would have been obvious to one of ordinary skill in the art of finance at the time of applicant's invention to carry out the financial analysis method with the property as a component of an other property, for the obvious advantage of determining the prices at which it would be profitable to buy or sell properties which are components of other properties.

**Rejections of claims 226-257.**

Claim 226 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg (5,774,880); claims 227-257 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginsberg in various combinations with Coughlan and Epstein.

Claims 226-257 are closely parallel to claims 64-95, respectively, and rejected on the same grounds.

***Answer to Appellant's Appeal Brief***

The issue is whether Appellant's many claims were or were not properly rejected as obvious over Ginsberg (U.S. Patent 5,774,800) in view of various other prior art used in making rejections, and of takings of official notice for which support was made of record in response to Appellant's challenge. Examiner holds that the rejections are proper, for the reasons set forth below. Examiner wishes to observe that many of Appellant's claims recite in essence what the prior art discloses, but do so in elaborately tangled phrases that make it difficult to pin down the precise meanings, and add computer hardware limitations to business method claims, where the computer hardware limitations are extremely well known (e.g., that the computer has a digital electrical computer processor), but where effort was necessary to adduce prior art actually establishing the well-known character of the hardware limitations. Other claims add business method limitations that either appear obvious and nearly tautological on their face (e.g., "with the valuation reflecting the price"), or make trivial additions and distinctions to the basic claims (e.g. "wherein the controlling includes generating the valuation for at least one security for corporate debt as the property" [claim 68], vs. "wherein the controlling includes generating the valuation for corporate debt as the property" [claim 72]).

First, Appellant argues with regard to claim 1 that the primary reference, Ginsberg (U.S. Patent 5,774,880) does not teach the claimed property, but merely relates to a hypothetical portfolio of securities, and something hypothetical is not property (Appeal Brief, pages 82-86). Examiner disagrees, and points out that Ginsberg discloses making a financial analysis for a portfolio of securities, wherein the *portfolio* may arguably be called hypothetical, but wherein the *securities* are actual property. Thus, in valuing the securities based on market data, Ginsberg discloses generating a market-based valuation for property (column 4, lines 30-67; column 5, lines 34-63), exactly as recited in Appellant's claim 1, and in other, more or less parallel, claims.

Even with regard to the portfolio, Appellant's argument that Ginsberg does not disclose actual property is highly questionable, and in conflict with Ginsberg's own words. In column 4, lines 50-67, Ginsberg refers to "quantifying and closing specific options positions pursuant to the trading of option contracts on the indexed portfolio," and "future contracts based on the portfolio index." Ginsberg further refers to a futures market based on the underlying portfolio in column 9, line 52, through column 10, line 7, and then discloses the delivery of actual securities to be delivered pursuant to the futures contract (column 10, lines 8-19). Option and futures contracts are property, and actual securities are actual property; therefore, the index according to Ginsberg cannot be dismissed as a mere hypothetical unrelated to actual property.

It may also be observed in general that modern finance involves abstractions; large amounts of money – meaning, ultimately, the possession of tangible resources – may depend upon abstractions such as options, futures contracts, derivatives, and

interest rate swaps. The last named, for example, typically involve the exchange of a hypothetical loan at a fixed interest rate for an equal-sized and equally hypothetical loan at a variable interest rate, after which payments between the parties to the swap depend on the difference between the fixed interest rate and the variable rate. The loans cancel one another, and are in a sense hypothetical; the interest payments are real. If the whole world were to accept Appellant's view that something hypothetical cannot be property, Wall Street would have to make major changes in its activities.

Secondly, Appellant contends that Ginsberg does not disclose the second computer and second valuation recited in Appellant's claims (Appeal Brief, pages 86-87). Examiner responds that Ginsberg does disclose generating a second market-based valuation for the property (column 7, line 37, through column 9, line 51) reflecting computation of a current market-based yield discount rate for the property, meeting another limitation of claim 1, so this part of Appellant's contention should be dismissed.

Appellant is correct that Ginsberg does not expressly disclose electrically communicating some of the financial analysis output as input to a second electrical digital computer. The issue is whether incorporating a second computer would have been obvious or nonobvious to one of ordinary skill in the art. Examiner took the position that it would have been obvious, and provided a statement of motivation, that it would have been obvious "to electronically communicate at least some of the financial analysis output as input to a second computer . . . for the obvious advantage of making the information . . . available for use by the second computer, which might be remote

from the first computer, or possess capacities (e.g., greater processing power, access to confidential information) lacking in the first computer.”

In accordance with *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. In this case, it would have been knowledge generally available to one of ordinary skill in the art that the Internet existed, that other computer networks (e.g., LAN's and WAN's) existed, and/or that transmission of data between computers was well known. The Internet, for example, is routinely used to communicate information from one computer to another, where the second computer is more convenient to the person who wants to view or make use of the information, or the second computer has, for one of the reasons given, greater capacities to make use of the information. Ginsberg's patent itself discloses transferring information over a network, and implies transfer of information between computers, since Ginsberg refers to information (about a portfolio) being “displayed and made available to the associated network as an index” (column 9, lines 48-49). Therefore, transferring the information from one computer to a second computer would have been an obvious and motivated procedure to one of ordinary skill at the time of Appellant's invention.

Thirdly, Appellant argues that Ginsberg does not disclose the claimed input for the second computer (Appeal Brief, pages 87-88). Examiner responds that this is a strictly contingent issue; if the use of a second computer as claimed is considered obvious over Ginsberg, inputting data to the second computer is necessarily included. The second computer cannot be a functional part of the system unless data is inputted to it.

Fourthly, Appellant argues that his invention is different from Ginsberg's because Ginsberg does not teach that the second market-based analysis reflects the claimed computation of a current market-based yield/discount rate for the property being valued. Appellant writes, "Nothing in Ginsberg says that his index traders, fund managers, and other folks are doing this claimed computation." Examiner responds that Ginsberg sets forth the procedures of such a computation at some length (column 7, line 37, through column 9, line 51); it is true that Ginsberg's index traders, fund managers, etc., are not doing the claimed computation, but that is because a data processing system is doing it for them, and then displaying the results for their benefit. Nowhere do Appellant's claims recite that index traders or fund managers have to perform the computation; rather, the results of the first market-based valuation are recited as being communicated to a second computer, which performs the second valuation.

Next (Appeal Brief, pages 90-92), Appellant makes arguments regarding the alleged nonobviousness of modifying Ginsberg to have a second computer perform the second valuation, or to use the output of a first computer as input for a second

computer, which, in essence, Examiner has already replied to in the two pages and more immediately above.

Appellant next challenges Examiner's takings of official notice (Appeal Brief, pages 92-96), in part repeating points which have already been made in the Appeal Brief and answered in the present Examiner's Answer. However, Appellant also makes new arguments regarding official notice in particular, alleging that Examiner has used official notice of individual and separate hardware possibilities strung together with guidance only from Appellant's claims, in an improper determination of obviousness. In response, it is worth reviewing what Examiner took official notice of in rejecting claim 1: (a) that it is well known for output means (e.g., printers, monitors, modems) to be electrically connected to computers, (b) that it is well known to use digital electrical computer processors to manipulate electrical signals in manipulating data and performing calculations, and (c) that it is well known to electronically communicate the output of one computer to a second computer, which then stores the output in memory. There is no serious question of any of these being new inventions of Appellant, nor yet of their being rare features which only a flash of brilliant inspiration could have led anyone to combine with Ginsberg. Rather, they are standard features of commonly used computers and (in the case of (c)) systems of computers, likely not disclosed in Ginsberg only because Ginsberg, in applying for a business method patent, was not concerned with the details of the hardware used to carry out his invention. It might be possible to carry out Ginsberg's invention with an analog computer, or with a mechanical computer as conceived by Charles Babbage in the nineteenth century,



possibly coupled mechanically to a manual typewriter, or to an apparatus for releasing carrier pigeons; but these are not the techniques that would first spring to the mind of a typical engineer reading Ginsberg's patent. Rather, such a person, if instructed to carry out Ginsberg's invention, would buy standard computer equipment with which to perform the job, and whichever common brand of computer he procured, the computer would use a digital electrical computer processor or processors to manipulate electrical signals in performing computations, and would use standard methods (such as an electrical connection) to link the computer to standard output devices (such as a printer, monitor, or modem).

It is for this reason that Appellant's complaints of non-analogous art are beside the point. In a case such as this, an invention involving distinct arts, those skilled in the art are those skilled in both arts, the adepts of each art carrying out the aspects proper to their specialty (*In re Naquin* 398 F.2d 863, 866, 158 USPQ 317, (CCPA 1968); *Ex parte Zechall*, 194 USPQ 461 (Bd. App. 1973)). In the present case, the issue is whether the financial elements of the claims would have been obvious to one of ordinary skill in the art of finance, with the computer hardware elements obvious to one of ordinary skill in the art of computer technology. Examiner does not contend that one of ordinary skill in the art of finance would have been motivated to combine Ginsberg with "Decimal Point or Comma Printing in Multi-Cipher Digital Printers" in particular, or even to consider the "Decimal Point" patent in particular. Rather, one of ordinary skill in the art of finance would have been motivated to use off-the-shelf computers, or would have delegated the more technical aspects of the project to a person of ordinary skill in

the art of computer technology, who would have been motivated to use off-the-shelf computers. The motivation, in either case would have been "for the obvious advantage of having data manipulation and calculations performed with standard, widely available, and relatively economical equipment," to quote Examiner's rejection of claim 1. The "Decimal Point" patent was cited for stating explicitly what one having ordinary skill and familiarity with computers would have known, that computers can be electrically connected to output means.

A less intransigent patent applicant would not have challenged Examiner's taking of official notice that it is well known to use digital electrical computer processors to manipulate electrical signals in manipulating data and performing calculations; however, Appellant challenged all of Examiner's takings of official notice, leading Examiner to find and make of record references supporting his takings of official notice. Most patents and non-patent documents in the fields of finance and electronic commerce do not detail the internal workings of the computers used; there is no need for them to do so, since, following *Ex parte Zechnall* and *In re Naquin*, they are considered enabling without disclosing such details. Therefore, Examiner made of record patents and other documents from other areas to establish the use of digital electrical computers manipulating electrical signals in manipulating data, the use of output means electrically connected to computers, etc.

Appellant's view of analogous art is too narrow, in attempting to exclude computer technology references from being considered pertinent to an alleged invention in the field of finance, even though the claims recite particular features of computer

technology. Granted, a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In the present case, Appellant's claim recitations of computer technology make references in the field of computer technology "reasonably pertinent" to the particular problem with which Appellant was concerned, especially considering that the primary reference, Ginsberg, discloses the use of a computer to implement his financial invention.

If Appellant's position regarding the allegedly non-analogous nature of the references used by Examiner to support his takings of official notice were accepted as patent law, various unjust and absurd results would follow. For example, a future applicant could apply for a patent on an automobile similar or identical to cars already on the road, and include in his claims such limitations as "wherein the workers who assemble said automobile are union members who receive health insurance as part of their compensation," or "wherein the rubber in said tires is at least partly manufactured from latex gathered from wild rubber trees in the Brazilian rain forest." Then, when a patent examiner cited a description of a car meeting most of the claim limitations as a primary reference, and used other documents to meet the limitations regarding labor relations or rubber gathering, the applicant could obtain a patent on the grounds that sources on labor relations, health insurance, and latex gathering are not analogous art for an application in the field of automotive engineering. Having obtained his patent, the

applicant could then sue Ford and General Motors for infringement, since their cars are assembled by union members who receive health insurance, etc. Such a result would be no more absurd than allowing a patent on a claimed invention in the field of finance which differs from the nearest prior art principally in making explicit the electrical nature of the computers used in financial calculations.

Not wishing to expand this Examiner's Answer unduly, Examiner will not attempt a line-by-line rebuttal of Appellant's arguments on pages 97-102, insofar as they depend on points previously made and rebutted, with one exception treated below. Examiner has already defended his statements of motivation, and pointed out that, contrary to Appellant's contention, Ginsberg does perform valuations of "honest to goodness property," not only of a hypothetical portfolio, as reading Ginsberg's patent will confirm. As to Appellant's new argument that the proposed modification would destroy Ginsberg's intent, purpose, and function, this is based on the assumption that the proposed modification would involve a second and less accurate computation of the value of Ginsberg's index, but in fact no such modification is needed to meet Appellant's claim limitations. Instead, Ginsberg already discloses generating a second market-based valuation for the property (column 7, line 37, through column 9, line 51). The major modification of Ginsberg needed to meet the limitations of Appellant's claim 1 is to have the second valuation generated at a second computer.

Next, Appellant disputes Examiner's contention that Ginsberg nonetheless discloses making sales (Appeal Brief, pages 103-104), and contends that the sales described in Ginsberg are not sales of what Appellant calls "the hypothetical portfolio,"

but merely sales of options and futures contracts. This is going further out on a limb which has already been sawed off at the trunk. If claim 1 recited making sales, one might reasonably inquire whether the sales disclosed in Ginsberg met the particular claim limitations recited, but claim 1 does not recite making sales at all. Examiner mentioned in passing in the Final Rejection that Ginsberg does disclose making sales only because Appellant had argued that if you have two computers doing two valuations, you do not have a real-time barometer of the marketplace (the need addressed by Ginsberg), but a market situation for making a sale. Examiner also observed, at that point in the Final Rejection, that Appellant's argument was in conflict with claim 1, which recited "A method for making financial output," with no recitation of making a sale.

Appellant then further repeats arguments and summarizes his conclusions (Appeal Brief, pages 104-108). Examiner, for the reasons set forth above, stands by his own conclusion that the rejection of claim 1 was proper.

Next, there is the issue of tax exemption, which Appellant argues under the heading, "Further as to claims 1, 8, and 14" (Appeal Brief, pages 108-111). Appellant begins by writing "The arguments set forth for Group A are reasserted here with equal force, as they are equally applicable here," to which Examiner responds that the rebuttals set forth by Examiner are reasserted here with equal force. As regards tax exemption, Examiner wrote that Treasury securities are generally exempt from state taxes, and municipal bonds are in many cases exempt from the federal income tax. In response to Appellant's challenge of all takings of official notice, Examiner made

Walters and Sharp of record to confirm these two statements. Appellant now writes that Examiner was in error to call Treasury bonds tax exempt, and refers to applicable regulations providing that interest on United States Treasury obligations is fully taxable. Examiner responds that Examiner was not in error, because Examiner never asserted that Treasury bonds were exempt from federal income tax, but that Treasury bonds are generally exempt from state taxes. Examiner also wrote that municipal bonds (disclosed by Ginsberg) are in many cases exempt from federal income tax. Either kind of bond could therefore be called "tax-exempt," depending on which tax is under discussion, although it is municipal bonds which are generally so described.

Appellant, having admitted that Ginsberg mentions municipal bonds, which are widely known as tax-exempt, argues that Ginsberg does not disclose how to handle the default risk. Examiner responds that some adjustment of Ginsberg's disclosed methods would be obvious to one of ordinary skill in the art of finance reading his patent; Ginsberg certainly thought so, since he wrote "Treasuries . . . are used exclusively in the following discussions, with the fundamental tenant [sic] that the principles may be applied to other types of fixed income securities without departing from the inventive concepts." (column 1, lines 50-55). The Patent Office evidently agreed with Ginsberg, since the claims in Ginsberg's patent do not contain any limitation that the securities must be Treasury obligations.

Appellant argues essentially the same point with regard to corporate bonds and claims 4, 6, 10, 12, 32, 34, and 40 (Appeal Brief, pages 111-112). Ginsberg mentions corporate bonds as fixed income securities (column 1, lines 22-27), and Examiner

believes it proper to take Ginsberg at his word, and the patent examiner who allowed Ginsberg's case at her judgment, in concluding that modifications to Ginsberg's expressly disclosed method to deal with securities that had a non-zero risk would be within the capacity of one of ordinary skill in the art of finance at the time of Appellant's invention. There are, after all, services which rate bonds, with bonds believed to carry higher risk paying correspondingly higher interest rates, or selling at discounts reflecting the perceived risks.

Appellant next argues regarding claims 64, 66, 226, and 228, which recite a system-determined purchase price in consummating a sale, that Ginsberg does not disclose such a price in consummating a sale (Appeal Brief, pages 112-114). The obvious reply is that, as set forth in the rejection of claim 64, Ginsberg does disclose generating a financial analysis output having the system-determined purchase price for the property in consummating the sale (column 9, line 45, through column 10, line 7). Appellant, however, argues that this is a disclosure of the sale of options and futures, not the property for which the market-based valuation was generated. Examiner responds that Ginsberg discloses the delivery of actual securities to be delivered pursuant to the futures contract, where the actual securities to be delivered are chosen by scanning the market (column 10, lines 8-19), and these actual securities may be among the property for which the market was already scanned (column 4, lines 30-67) in performing Ginsberg's market-based valuation for property (column 4, lines 30-67; column 5, lines 34-63). Therefore, Ginsberg's system-determined purchase price for

property can be for the same property for which the market-based valuation was generated.

With regard to claims 57-63, which were rejected as unpatentable over Ginsberg (5,774,880) in view of Lupien et al. (5,101,353), Appellant argues that Lupien does not teach an "offering document" as defined by the Securities Act of 1933, etc., and therefore does not provide proper grounds to reject the claims (Appeal Brief, pages 114-119). Examiner points out that Lupien does disclose an offer to sell securities (as Appellant essentially admits on page 116 of the Appeal Brief), and that, in examining the claims, it is proper to give them the broadest reasonable interpretation. Thus, an offer to sell securities could be read as an offering document, as the claims in question do not recite any explicit limitation that the offering document must be an offering document according to the Securities Act, relating to the issue of new securities (in fact, the claims originally used the term "offering memorandum" rather than "offering document," until Appellant made the change by an After Final Amendment). Moreover, Appellant did not create file wrapper estoppel by narrowly defining "offering memorandum/document" in his response to Examiner's non-final rejection. Only now has Appellant defined "offering document" as something which Lupien clearly does not teach, raising the issue of whether other art, such as the Securities Act of 1933, could be used to establish that offering documents, narrowly defined, are well known.

Appellant repeats various points in pages 119-125 of the Appeal Brief; Examiner reasserts his rebuttals, as set forth above.



Then, on page 125, Appellant begins his case regarding claims 43, 45-46, 67, 96-101, 104-111, 116-117, 158 and 229 by stating that his arguments set forth for Group A1 are reasserted with equal force. Examiner, by the same principal, reasserts his counterarguments with equal force. Then Appellant makes a new argument, disputing the applicability of Coughlan ("Financial Add-ins Lighten Load of 1-2-3 Users . . ."). Appellant argues that Coughlan only refers to a training module for midlevel bank people to help them quantify risk more accurately, upon which Appellant writes, "This is not a teaching of a valuation. This is a training module." Examiner responds that the existence of a training module implies that the designers of the training module knew how to do what the training module teaches pupils to do, and that the pupils, if the training module is of any worth, emerged with a greater knowledge of doing what the training module teaches. Coughlan discloses a training module for midlevel bank people to help them quantify risk more accurately; therefore, there were techniques for quantifying risk with fair accuracy known to midlevel bank people and their trainers at the time that Coughlan's article was published. Coughlan does not describe in detail what these techniques were; but then, Appellant's claim 43 does not recite a detailed description of how risk is to be quantified, but only recites that the valuation reflects the quantitative description of risk. The claim, if allowed, would cover any use of a quantitative description of risk in generating a valuation according to claim 1, and any quantitative description of risk that could be combined with Ginsberg may be a basis for rejecting the claim. It is largely beside the point that Coughlan does not expressly teach a valuation; Ginsberg does disclose performing a valuation. Similarly, while Coughlan

may teach a quantitative description of risk as an output, that is in no way incompatible with Ginsberg's use of a quantitative description of risk as an input; the output of one process is quite commonly used as an input for another.

Appellant argues that an index such as Ginsberg's could not utilize a numerical indication of risk, as in, "The S&P was up 137 points today, but the S&P reflects a 20% risk." Examiner responds that Appellant is being inconsistent; having repeatedly emphasized the difference between actual property and a hypothetical index, Appellant now argues the implausibility of applying risk to an index, when claim 1 recites that a market-based valuation *for the property* reflects a quantitative description of risk, and Ginsberg discloses beginning with a market-based valuation for actual property, and defining an index on that basis. Ginsberg discusses Treasury bonds, which have the advantage of minimal and uniform default risk (column 1, lines 50-60), but Ginsberg also states that, "the principles may be applied to other types of fixed income securities without departing from the inventive concepts" (ibid.). An application of Ginsberg's principles to other types of fixed income securities, with substantial default risks, would presumably involve taking the default risks into account. Thus, a zero-coupon high-risk bond scheduled to return \$1000 dollars in five years would be valued at an appropriate discount compared to a zero-coupon Treasury with the same maturity and face value, the size of the discount depending on the quantitative risk of the high-risk bond. If Appellant believes otherwise, the question must arise of whether Appellant believes that "junk bonds," "gilt-edged" bonds, and bonds of intermediate ratings from Moody's Investor's Service of the same maturity all currently trade at the same prices, or perhaps

at prices which differ randomly, without regard to the perceived quantitative descriptions of risk.

This, Examiner submits, is absurd on its face, and so is Appellant's argument that there is no reason to combine. If the advantage of "obtaining usable estimates of the risks involved in purchasing an item of property" is not obvious, then why do services exist for rating bonds, bank assets (as per Coughlan, and it is to be noted that mortgages and other bank assets are commonly securitized), and other items of property that involve risk? On the contrary, the existence of bond ratings, methods for assessing the risks of bank assets, etc., show that there are substantial and widely realized advantages to obtaining usable estimates of the risks involved in purchasing an item of property.

Appellant proceeds to argue with regard to claims 96-101, 104-111, and 116-117, that there is no teaching of a second member of the group (the group consisting of the price and the quantitative description of the risk) (Appeal Brief, pages 131-132). Examiner replies that Ginsberg does teach generating a valuation reflecting price (column 4, lines 30-39), and a quantitative description of the risk is held to be obvious in view of Coughlan, for the reasons set forth above.

Appellant then argues that, with regard to claims 97, 99, 101, 105, 107, 109, 111, and 117, Ginsberg does not disclose a risk free rate (Appeal Brief, pages 132-134). As Appellant has repeatedly pointed out, however, Ginsberg discusses his invention with particular application to Treasury securities, which, in Ginsberg's words, have the important attribute of minimal and uniform default risk (column 1, lines 55-60).

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Appellant now attempts to narrow the meaning of "risk-free rate," and makes another document of record to support his position, Investments, by Sharpe et al., 1995. This book teaches that a risk-free asset must be one issued by the federal government, but that not all Treasury securities qualify as risk-free assets. For example (again following Sharpe's Investments), a Treasury security which reaches maturity in twenty years is not risk-free to an investor with a three month holding period, due to interest rate risk (page 233). However, even if "risk-free rate" is to be given the narrowed meaning which Appellant now wishes to give it (and this again raises the issue that claim language should, in the course of examination, be given the broadest reasonable interpretation, rather than a narrower interpretation based on a document introduced only upon appeal of a final rejection), it does not follow that Ginsberg fails to teach a risk-free rate. Ginsberg teaches that Treasuries are available in a variety of forms with different maturities and terms (column 1, lines 42-49), and further teaches a portfolio of Treasury securities (column 5). Thus, investors with a variety of time horizons should be able to find Treasury securities suited to their needs; conversely a Treasury security of a particular maturity (or a zero-coupon bond or stream of coupons formed by stripping a longer term Treasury note or bond) will qualify as providing a risk free-rate to investors whose desired holding periods match the maturity of the security in question. Therefore, Ginsberg does disclose a risk-free rate, even by the narrowed definition based upon Sharpe's Investments.

Appellant next argues as to claims 98-101 that Ginsberg is not enabling for corporate debt, because such debt poses a non-zero risk (Appeal Brief, pages 134-

135). Examiner responds that modifying Ginsberg to take non-zero risk into account has already been discussed, and is justified, *inter alia*, Ginsberg's own words on the applicability of his principles to other types of fixed income securities (column 1, lines 50-55). Examiner reasserts his arguments, and prefers to save the reader's time by not repeating them.

Appellant argues as to claims 104-105 that Ginsberg's system is inapplicable to real estate, because real estate is not fungible, but depends on unique characteristics such as a particular location (Appeal Brief, pages 136-138). Examiner responds that Graff ("The Impact of Tax Issues on Real Estate Debt and Equity Separation") teaches treating real estate as comprising a portfolio of debt instruments (page 50, et subseq.), making Ginsberg's methodology, applicable to real estate, with the stream of rental payments from a property comparable to a stream of coupon payments from a bond, and the value of the real estate at the end of a lease comparable to the principal value of a bond at maturity. Thus, a modification of Ginsberg to incorporate real estate would have been workable to those of ordinary skill in the art of finance at the time of Appellant's invention. While different locations and different buildings may be unique and non-fungible, the money that can be obtained by leasing or selling real estate is fungible. Issues may arise from the particular advantages and risks of particular items of real estate, but different corporate and municipal bonds are also non-identical, differing in tax status, default risk, maturity, and payment terms, and yet the bond market is able to handle trade in bonds. It is difficult to accept Appellant's expressed views on the fundamental and radical differences between real estate and securities

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when Graff (the Appellant) is on record as doing so more than a year before Appellant's priority filing date ("The Impact of Tax Issues on Real Estate Debt and Equity Separation"). Finally, Appellant's much-repeated assertion that Ginsberg does not disclose handling "honest to goodness property" is rejected again, for the reasons set forth above.

Appellant argues as to claims 106-107 that Ginsberg's system is inapplicable to property not including securities (Appeal Brief, pages 139-143). Since "property not including securities" is a broader category than "real estate," Examiner's rebuttals in the preceding paragraph must apply here as well.

Appellant argues as to claims 110 and 111 that Ginsberg's Treasury security is not tax-exempt. This point has already been answered: first, Treasury securities are generally exempt from state taxes, and the claim language does not specify what taxes a "tax exempt" security is exempt from; secondly, Ginsberg also refers to municipal bonds, which are generally exempt from federal taxes, and thus "tax exempt" in the more common meaning.

Appellant argues as to claims 15, 17-28, 65, and 227 that the arguments set forth for Group A1 are reasserted with equal force, as they are equally applicable here (Appeal Brief, pages 144-148). Examiner responds that Examiner's counterarguments are likewise reasserted with equal force. In particular, Appellant's assertion that Ginsberg does not perform a market-based valuation of property fails on the ground that Ginsberg discloses exactly that (column 4, lines 30-67; column 5, lines 34-63). Furthermore, contrary to Appellant's views, Examiner believes his takings of official

notice regarding common computer hardware and communication features to have been entirely justified. When Appellant turns to claim 17, and to parallel claims, for which Epstein was used as a secondary reference, Appellant argues that Epstein does not even mention a performance scenario, and instead talks about the advantage of investing in a diversity of bonds. Examiner responds that merely because Epstein does not use the words "performance scenario" does not establish that Epstein does not teach the use of a performance scenario. Epstein uses the phrase "market scenario," and describes how different market scenarios can affect the prices and thus the performances of bonds with different durations and coupon rates, which does amount to teaching a market-based evaluation reflecting the expected return under a performance scenario. Epstein's literary techniques (describing how he arrived early for the mortgage conference and was enjoying the weather) do not detract from the teachings of his article.

As to claims 17 and 23, Appellant argues that Ginsberg is not enabling for corporate debt (Appeal Brief, pages 148-150). The relevance of this argument is questionable, since neither claims 17 and 23, nor claims 3 and 9, upon which they depend, respectively, recite corporate debt; perhaps Appellant intended to make this argument with regard to other claims. In any event, Examiner reiterates his counterargument that Ginsberg's invention is applicable to corporate and municipal debt (see above, pages 60-62).

As to claim 65, Appellant argues what has already been argued with regard to claims 64, 66, 226, and 228, that Ginsberg does not disclose a system-determined price

in consummating the claimed property (Appeal Brief, pages 150-151). Examiner reasserts the rebuttal made in regard to those claims, that Ginsberg discloses the delivery of actual securities to be delivered pursuant to the futures contract, where the actual securities to be delivered are chosen by scanning the market (column 10, lines 8-19), and these actual securities may be among the property for which the market was already scanned (column 4, lines 30-67) in performing Ginsberg's market-based valuation for property (column 4, lines 30-67; column 5, lines 34-63). Therefore, Ginsberg's system-determined purchase price for property can be for the same property for which the market-based valuation was generated.

As to claims 2, 30, and 118-177, Appellant reasserts the arguments for Group A1 with equal force (Appeal Brief, pages 150-151); Examiner likewise reasserts the counterarguments. Appellant then repeats arguments regarding Ginsberg's alleged deficiencies, and allegedly non-analogous art, which Examiner has previously rebutted. Then Appellant makes arguments regarding the combination of Ginsberg and Graff ("The Impact of Tax Issues on Real Estate Debt and Equity Separation"). Appellant argues that the combination cannot be made because Ginsberg does not disclose an index system that handles any property; Examiner has already pointed out, and a reading of Ginsberg will confirm, that Ginsberg's index does handle property (e.g., column 4, lines 30-67; column 5, lines 34-63; column 9, line 52, through column 10, line 19). Appellant asserts that the notion of trading lease or mortgage options or futures is preposterous. Examiner does not find it preposterous at all. It is known to securitize mortgages, selling the right to receive a stream of mortgage payments; why does



Appellant suppose it to be absurd to trade futures or options in such mortgages, particularly in light of the teaching of Graff (the Appellant, let it be recalled) that real estate leases can be treated as "a portfolio of debt instruments similar to corporate bonds" (to quote from the first paragraph of Graff's article)? In making this argument, Appellant comes close to declaring his own ideas (as disclosed more than a year before the patent application's priority filing date) to be "stupefying and so farfetched as to be surreal" (Appeal Brief, page 153). Appellant's argument regarding fungibility has already been answered; while a particular piece of real estate may be unique, the money received in lease payments on such a piece of real estate is fungible. Such rhetorical questions of Appellant's as, "What is an option on a lease?" have answers: e.g., an option on a lease is an option to purchase from the lessor the stream of lease payments from the lessee.

Appellant's arguments regarding the alleged insufficiency of Examiner's stated reasons to combine amount to asserting that Ginsberg does not disclose the teachings of Graff, and Graff does not disclose the teachings of Ginsberg. This is attacking the individual references in a vacuum, without giving due consideration to what the combination would have suggested to one of ordinary skill in the art. References should not be considered in a vacuum, but against the background of the other references of record (*In re Ehrreich*, 590 F.2d 902, 908-909, 200 USPQ 504, 509-510 (CCPA 1979)). Appellant further argues for the allowability of his claims involving property not including securities (such as real estate, which is not a security) based on Examiner's admission of the allowability of claims which specify tangible personal property. Examiner

disagrees, and calls attention to Appellant's quotation of what Examiner wrote in the Final Rejection regarding the allowability of such claims:

[T]he Ginsberg methodology computes a discount or premium from par and a true yield to maturity, which are inapplicable to cars, furniture, or other tangible personal property. Tangible personal property can be leased, and it would be possible to temporally decompose leased tangible personal property into an equity asset and a portfolio of debt instruments, by analogy to what Graff ("The Impact of Tax Issues on Real Estate Debt and Equity Separation") teaches doing for real estate; however, the mere potential of doing this does not make it obvious to do.

However, there is more than a mere potential for applying Ginsberg's methodology to real estate leases, a species of non-security property; there is the motivation and teaching of Graff. For this reason, the allowability of the claims specifying tangible personal property does not extend to claims with no such limitation.

Appellant proceeds to argue with regard to claims 118-127 and 138-147 that Graff does not teach "the temporal decomposition of property," but admits that Graff teaches the decomposing of property benefits into a lease and a leased fee (Appeal Brief, pages 165-167). Graff's article is even clearer, describing commercial real estate as divisible into two components: (1) a portfolio of leases, and (2) an equity component consisting of the owner's residual rights after existing leases expire. Graff goes on to teach structuring property ownership so that the leases are separated from residual occupancy rights. If this does not qualify as a temporal decomposition of property – and Examiner holds that it does so qualify – then it is difficult to see how Appellant's disclosed invention would qualify. Appellant attempts to draw the distinction that the

Graff article teaches only a decomposition of economic benefits, not a temporal decomposition of property, but since property comprises the right to receive economic benefits, it is difficult to see how this distinction can be maintained. Appellant cites a Treasury regulation, an Internal Revenue Code Revenue Ruling, and a court precedent in support of his position, but then admits that there are other authorities which make the tax treatment of carved-out lease interests unclear, and cites them. Examiner takes this conflict as indicating that there is no clear distinction between the temporal decomposition of property and the temporal decomposition of economic benefits, and also as indicating that the tax code does not necessarily provide unambiguous answers to questions arising from complicated financial dealings, especially of a type not invented when the tax code was written. There may not be an unambiguously correct answer to the question of whether a sale of the debt component of leased commercial property is the sale of an asset, or prepaid rent, except as law and precedent establish one after the fact. It is further to be noted that the Graff article itself admits that it is uncertain how dealings of the type proposed will be treated for tax purposes (pages 54-57 of Graff; note final paragraph on page 55 in particular).

Appellant's further arguments regarding lack of obviousness depend, *inter alia*, on Appellant's assertion that Ginsberg does not teach the sale of actual property, when Examiner has already called attention to Ginsberg's doing so, and to the alleged inapplicability of Ginsberg to anything except Treasury securities, despite Ginsberg's own words that his principles can be applied to other securities, and his explicit mention

of corporate and municipal bonds (column 1). Therefore, Appellant's further arguments should be rejected.

Appellant argues with regard to claims 119, 124, 139, and 144 that there is no teaching of the claimed remainder interest, despite Graff's explicit teaching of a residual interest, and cites Gifis's "Law Dictionary" for support (Appeal Brief, pages 170-171). However, it has not been established that Gifis's legal definition of "remainder" is the only reasonable meaning, nor does Appellant provide a legal definition of "residual"; hence, it is not established that "residual" and "remainder" have distinct meanings. Merriam-Webster's Collegiate Dictionary (tenth edition, 1997), gives a shortened version of the legal definition of "remainder," but also gives as the second meaning, "a remaining group, part, or trace," which is much broader, and covers a residual interest as a remaining part. Moreover, Examiner notes once again that it is proper, in examining a claim, to give the claim language the broadest reasonable interpretation; also, that where Appellant has not narrowed the meaning by explicit claim language or by file wrapper estoppel at any previous point in the prosecution history, it would be unreasonable to assume a narrowed meaning upon appeal.

Appellant argues with regard to claims 120, 125, 140, and 145 that there is no teaching of the claimed equity interest in a remainder interest (Appeal Brief, pages 171-172). Examiner did not assert that there was, but pointed out that equity interests in general are well known. Appellant's argument that Examiner's case is a long way from showing any method of valuing an equity interest in a remainder interest would be more persuasive if it were not easy to multiply a value by a fraction (especially in this age of

pocket calculators). Furthermore, it would have been obvious to perform such a simple mathematical operation, for the obvious advantage of determining a reasonable price at which to buy or sell an equity interest. Once the value of a remainder interest has been determined, an equity interest of x% of that remainder interest is presumptively worth x% of the determined value of the remainder interest. (Appellant points out with on pages 174-175 of the Appeal Brief that the value of an equity interest may not be determined by such a simple formula in the case of an equity interest in an illiquid asset, but many assets are liquid assets to which the simple formula does apply.)

Appellant argues with regard to claims 121, 126, 141, and 146 that there is no teaching of the claimed estate for years interest (Appeal Brief, pages 172-173), but that argument depends on the assumption that Graff does not teach a component of temporally decomposed property. Examiner holds that Graff does so, and by appellant's admission, Graff at any rate teaches the decomposition of economic benefits. Appellant argues that "estate for years" is well defined in real estate law, but does not supply the definition, and thus provides no basis for the assertion that an "estate for years" interest does not correspond to Graff's term of years equity interest. Examiner notes yet again that it is proper, in examining a claim, to give the claim language the broadest reasonable interpretation.

Appellant argues in regard to claims 122, 127, 142, and 147 that there is no teaching of the claimed term of years interest (Appeal Brief, pages 173-174). Once again, Appellant's argument depends on the assumption that Graff does not teach a component of temporally decomposed property. Examiner holds that Graff does so,

and by Appellant's admission, Graff at a minimum teaches the decomposition of economic benefits. Appellant argues that a term of years interest is very different from the term of a lease, but the Graff article teaches treating the interest in receiving a stream of lease payments as a quasi-term of years interest. Appellant argues that the IRS would not allow amortization of a lease in a tax filing, but Graff, as noted above, teaches that it is uncertain how his separate debt and equity interests in real estate would be treated for tax purposes (pages 54-56 of Graff's article), and distinguishes a portfolio of debt instruments derived from a lease from a lease as such (pages 51-52 of Graff's article). Examiner notes yet again that it is proper, in examining a claim, to give the claim language the broadest reasonable interpretation.

Appellant argues in regard to claims 123-127 and 143-147, that Graff has no teaching of the claimed fractional interest in a component of temporally decomposed property (Appeal Brief, pages 174-175). This essentially repeats arguments Appellant has previously made concerning temporal decomposition and fractional interests, and which Examiner has rebutted.

The next section of Appellant's Appeal Brief (pages 175-190), regarding claims 128-137, essentially repeats arguments already made and already rebutted in discussions of other claims. Examiner's arguments regarding the applicability of references to computer hardware, the relevance of Ginsberg to property and sales, fractional equity interests, etc., are reasserted. However, one point may be briefly addressed. Appellant argues on page 176 that Epstein's "duration" has nothing to do with indefinitely owning property. Examiner responds that Epstein's duration has to do

with the duration of bonds (which are to be paid off at maturity, and therefore, in truth, will not be owned indefinitely), while Ginsberg discusses Treasury securities with known maturities, which will not be owned indefinitely, and Graff teaches a portfolio of debt instrument which will not be owned indefinitely. Therefore, it is difficult to see how Epstein's "duration" disqualifies Epstein from being combined with Ginsberg and the other prior art of record. It may be that one would not use Epstein's bond selection criteria to select a lease in leasing an apartment to inhabit, but it does not follow that one would not use Epstein's teachings regarding duration to help value a stream of payments derived from a lease. On the contrary, changes in interest rates would affect the value of such a stream of lease payments in much the same way that they would affect the value of bonds, so Epstein's teachings are very much applicable.

Appellant next argues in regard to claims 68-75, 80-95, 112-115, and 230-257 that there is no reason to combine or modify (Appeal Brief, pages 191-193). This again repeats arguments that have been made and rebutted with regard to other claims, and although Appellant writes, "Not previously addressed is the proposed combination of adding Coughlan to the mix," this can at most apply to the particular mix of prior art applied to those particular claims. In fact, Appellant has already presented arguments against using Coughlan as a valid secondary reference (the instant Appeal Brief, pages 125-131), and Examiner has defended his use of Coughlan (see above, pages 64-65); there should be no need to repeat the same points. There is nothing in the new combination of references which contradicts Coughlan, invalidates the applicability of

Coughlan's teachings, or prevents Coughlan teachings from being combined with Ginsberg's.

Appellant argues with regard to claims 68-71 and 230-233 that there is no enabling disclosure for at least one security for corporate debt (Appeal Brief, pages 193-194). Examiner responds, once again, that Ginsberg expressly discloses corporate debt (column 1, lines 16-26). Appellant argues that Ginsberg does not disclose taking a non-zero risk into account; Examiner replies that Coughlan teaches this, and that Ginsberg implies the possibility by stating that the principles of his invention can be applied to other securities than Treasuries (column 1, lines 50-55), a point which Examiner has made before with regard to other claims. Appellant's arguments should therefore be rejected with regard to these claims as much as Appellants similar or identical arguments should be rejected with regard to previous claims.

Appellant argues with regard to claims 72-75 and 234-237 that a security for corporate debt is not the same as corporate debt; e.g., a bank loan can be a corporate debt (but is not a security) (Appeal Brief, pages 194-195). That fails to make claim 72 and the claims parallel to it allowable, since they recite simply "generating the valuation of corporate debt as the property," with nothing to exclude the corporate debt from being a security. Since some corporate debt (corporate bonds, as disclosed in column 1 of Ginsberg) does consist of securities, claims 72-75 and 234-237 cannot be allowable if claims 68-71 and 230-233 are not; and Examiner has held them not to be, as set forth in the preceding paragraph and on pages 60-62 above.



Appellant argues with regard to claims 80-83 and 242-245 that there is no enabling disclosure for real estate (Appeal Brief, pages 196-200). Appellant argues that the cited art of Ginsberg, Coughlan, and Epstein do not mention real estate. However, while Appellant admits to not being the inventor of real estate, Appellant does not mention that he (Graff, "The Impact of Tax Issues on Real Estate Debt and Equity Separation") has taught the separation of real estate into debt and equity interests, the debt interests being comparable to corporate bonds, and has taught this more than a year before the priority filing date of the instant application. Appellant makes arguments which have been made and rebutted with regard to previous claims, e.g., the argument that real estate is not fungible, to which the rebuttal is that the money obtained from leasing real estate is fungible. Arguments that are not persuasive with regard to the same issues in other claims cannot provide reason for allowance here.

Appellant argues with regard to claims 84-87 and 246-250 that Ginsberg's method, even in combination with the other cited art, cannot be applied to property not including securities (Appeal Brief, pages 200-205). This essentially repeats Appellant's arguments for the patentability of claims 104-107, which Examiner has rebutted above, on pages 68-69 of this Examiner's Answer. The previous rebuttals are reasserted; there should be no need to repeat them here.

Appellant argues with regard to claims 92-95 and 255-257, that there is no teaching of tax exemption (Appeal Brief, pages 204-207). Examiner disagrees, and reasserts the counterarguments presented above, with regard to claims "1, 8, and 14," on pages 60-61 of this Examiner's Answer.

Appellant next argues with regard to claims 44, 148, and 152-177 (Appeal Brief, pages 207-214). Examiner suspects an error with regard to claim numbers, since, for example, claim 148 is not parallel to or dependent on claim 44. Be that as it may, Appellant proceeds to reiterate arguments made and rebutted previously. Examiner once again disputes Appellant's assertion that Ginsberg's system does not handle any property, and has set forth above (pages 51-52) the basis for concluding that Ginsberg does so. Appellant's argument that the proposed combination of Ginsberg and Graff is "so stupefying and farfetched as to be surreal" has already been made with regard to claims 2, 30, and 118-177, and answered above, pages 71-73. Appellant's arguments concerning the teachings and combination of Coughlan have already been made with regard to other claims, and answered above, pages 64-66. All of Examiner's previous rebuttals are reasserted.

Next, with regard to claims 148-152, Appellant argues that there is no teaching of a component of temporally decomposed property (Appeal Brief, pages 214-217). This is a repetition of arguments already presented with regard to other claims. Examiner has rebutted these arguments above, pages 73-74, and reasserts his counterarguments.

Appellant argues with regard to claims 149-152 that there is no teaching of a remainder interest (Appeal Brief, page 217). This is another repeated argument; Examiner reasserts his counterarguments, as presented above, page 75.

Appellant argues with regard to claim 150 that there is no teaching of the claimed equity interest in a remainder interest (Appeal Brief, page 218), repeating arguments

made previously. Examiner reasserts his counterarguments, made above on pages 75-76.

Appellant argues in regard to claim 151 that there is no teaching of the claimed estate for years interest (Appeal Brief, page 219). Appellant is again repeating arguments made and answered before; Examiner reasserts his counterarguments, made above on page 76.

Appellant argues with regard to claim 152 that there is no teaching of the claimed term of years interest (Appeal Brief, page 220). Appellant is again repeating arguments made and answered before; Examiner reasserts his counterarguments, made above on pages 76-77.

Appellant argues with regard to claims 153-157 that Examiner's contentions regarding fractional [interests] are traversed (Appeal Brief, pages 220-221). Essentially, this repeats Appellant's arguments regarding equity interests; Examiner reasserts his counterarguments, as presented above on pages 75-76 and page 77.

Appellant argues with regard to claim 154 that there is no teaching of the claimed remainder interest (Appeal Brief, page 221). This once again repeats arguments made and rebutted previously; Examiner again reasserts his counterarguments made above on page 75.

Appellant argues with regard to claim 155 that there is also no teaching of the claimed equity interest in a remainder interest (Appeal Brief, pages 222-223). This once again repeats arguments made and rebutted previously; Examiner again reasserts his counterarguments made above on pages 75-76.

Appellant argues with regard to claim 156 that there is no teaching of the claimed estate for years interest (Appeal Brief, pages 223-224). This has been addressed before; Examiner again reasserts his counterarguments made above on page 76.

Appellant argues with regard to claim 157 that there is no teaching of the claimed term of years interest (Appeal Brief, pages 224-225). Appellant's argument is a repetition of the arguments set forth before with regard to other claims; Examiner reasserts his counterarguments, as set forth above, pages 76-77.

Appellant argues with regard to claims 158-162 that there is no teaching of a second member of the group (Appeal Brief, pages 225-226), repeating an argument made above with regard to claim 96, on which claims 158-162 depend. Examiner reasserts his counterarguments made with regard to claim 96, as set forth above, page 66.

Appellant argues with regard to claim 159 that there is no teaching of the claimed remainder interest (Appeal Brief, pages 226-227). This once again repeats arguments made and rebutted previously; Examiner again reasserts his counterarguments made above on page 75.

Appellant argues with regard to claim 160 that there is also no teaching of the claimed equity interest in a remainder interest (Appeal Brief, pages 227-228). This once again repeats arguments made and rebutted previously; Examiner again reasserts his counterarguments made above on pages 75-76.

Appellant argues with regard to claim 161 that there is no teaching of the claimed estate for years interest (Appeal Brief, pages 228-229). This has been addressed before; Examiner again reasserts his counterarguments made above on page 76.

Appellant argues with regard to claim 162 that there is no teaching of the claimed term of years interest (Appeal Brief, pages 229-230). Appellant's argument is a repetition of the arguments set forth before with regard to other claims; Examiner reasserts his counterarguments, as set forth above, pages 76-77.

Appellant argues with regard to claims 163-167 that Examiner's contentions regarding fractional [interests] are traversed (Appeal Brief, pages 230-231). Essentially, this repeats Appellant's arguments regarding equity interests; Examiner reasserts his counterarguments, as presented above on pages 75-76 and page 77. (It may be noted that Appellant repeats the error of leaving out the word "interests" after "fractional"; this is irrelevant to the merits of the arguments, but does confirm that the same arguments are being repeated.)

Appellant argues with regard to claim 164 that there is no teaching of the claimed remainder interest (Appeal Brief, pages 231-232). This once again repeats arguments made and rebutted previously; Examiner again reasserts his counterarguments made above on page 75.

Appellant argues with regard to claim 165 that there is also no teaching of the claimed equity interest in a remainder interest (Appeal Brief, pages 232-233). This once again repeats arguments made and rebutted previously; Examiner again reasserts his counterarguments made above on pages 75-76.

Appellant argues with regard to claim 166 that there is no teaching of the claimed estate for years interest (Appeal Brief, pages 233-234). This has been addressed before; Examiner again reasserts his counterarguments made above on page 76.

Appellant argues with regard to claim 167 that there is no teaching of the claimed term of years interest (Appeal Brief, page 234). Appellant's argument is a repetition of the arguments set forth before with regard to other claims; Examiner reasserts his counterarguments, as set forth above, pages 76-77.

Appellant argues with regard to claims 168-172 that there is no teaching of a risk-free rate (Appeal Brief, pages 234-237). This repeats the arguments which Appellant made with regard to claims 97, 99, 101, 105, 107, 109, 111, and 117, and which Examiner answered above, on pages 66-67. Examiner reasserts his counterarguments regarding a risk-free rate, as set forth on pages 66-67, with regard to claims 168-172.

Appellant argues with regard to claim 169 that there is also no teaching of the claimed remainder interest (Appeal Brief, pages 237-237). This once again repeats arguments made and rebutted previously; Examiner again reasserts his counterarguments made above on page 75.

Appellant argues with regard to claim 170 that there is also no teaching of the claimed equity interest in a remainder interest (Appeal Brief, pages 238-238). This once again repeats arguments made and rebutted previously; Examiner again reasserts his counterarguments made above on pages 75-76.

Appellant argues with regard to claim 171 that there is no teaching of the claimed estate for years interest (Appeal Brief, pages 239-240). This has been addressed before; Examiner again reasserts his counterarguments made above on page 76.

Appellant argues with regard to claim 172 that there is no teaching of the claimed term of years interest (Appeal Brief, page 240). Appellant's argument is a repetition of the arguments set forth before with regard to other claims; Examiner reasserts his counterarguments, as set forth above, pages 76-77.

Appellant argues with regard to claims 173-177 that Examiner's contentions regarding fractional [interests] are traversed (Appeal Brief, pages 240-242). Essentially, this repeats Appellant's arguments regarding equity interests; Examiner reasserts his counterarguments, as presented above on pages 75-76 and page 77. (It may be noted that Appellant repeats the error of leaving out the word "interests" after "fractional"; this is irrelevant to the merits of the arguments, but does confirm that the same arguments are being repeated.)

Appellant argues with regard to claim 174 that there is also no teaching of the claimed remainder interest (Appeal Brief, pages 242-243). This once again repeats arguments made and rebutted previously; Examiner again reasserts his counterarguments made above on page 75.

Appellant argues with regard to claim 175 that there is also no teaching of the claimed equity interest in a remainder interest (Appeal Brief, pages 243-244). This once again repeats arguments made and rebutted previously; Examiner again reasserts his counterarguments made above on pages 75-76.

Appellant argues with regard to claim 176 that there is no teaching of the claimed estate for years interest (Appeal Brief, pages 244-245). This has been addressed before; Examiner again reasserts his counterarguments made above on page 76.

Appellant argues with regard to claim 177 that there is no teaching of the claimed term of years interest (Appeal Brief, page 245). Appellant's argument is a repetition of the arguments set forth before with regard to other claims; Examiner reasserts his counterarguments, as set forth above, pages 76-77.

Appellant next presents arguments concerning claims 178-180 (Appeal Brief, pages 245-251). Claims 178 and 179 are multiple dependent claims, depending on any of claims 64 through 177; claim 180 depends on claim 179. Claim 178 and claim 180 both recite that consummating the sale comprises consummating the sale through a financial exchange. As Ginsberg plainly discloses consummating the sale through a financial exchange (column 9, line 45, through column 10, line 7), claims 178 and 180 cannot by any stretch be allowable if the claims upon which they depend are not allowable. Appellant therefore reasserts his prior arguments regarding alleged deficiencies of the prior art of record used in making rejections, and the alleged implausibility of combining the various references. In response, Examiner reasserts his prior counterarguments regarding the adequacy of the prior art references, and the plausibility of combining them.

Appellant argues similarly although at less length regarding claim 179, the other multiple dependent claim (Appeal Brief, pages 251-252), incorporating previous arguments by reference. In response, Examiner incorporates his previous



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counterarguments by reference. Appellant also denies that Graff teaches having a property be a component of another property, the limitation recited in claim 179, and asserts that Graff merely discloses decomposing property benefits into a lease and a leased fee. Examiner calls attention to the first two sentences of Graff's article:

Recent research has shown that, as an investment, commercial real estate can be regarded as the sum of *two components* – one a true “equity” asset, the other a portfolio of debt instruments similar to corporate bonds. The researchers have asserted that property ownership can be structured to *separate the components* without incurring major transaction costs. [Emphasis added.]

After the components have been separated, then, following Graff's own words, the true “equity” asset and the portfolio of debt instruments are separately owned properties, as explained in more detail on page 51 of Graff's article, each of them a component of the original commercial real estate property. Therefore, claim 179 should not be allowable if the claims on which it depends are properly rejected, and Examiner has previously set forth his defenses of those rejections.

Appellant argues that the rejection of claims 238-241 is a mistake (Appeal Brief, pages 252-253), and Examiner is in agreement. These are parallel to claims 76-79 as claims 76-79 were when dependent on claim 64. Claims 76-79 were found to contain allowable subject matter, and later, after claim 76 was rewritten as an independent claim, found allowable. For the same reasons, claims 238-241 would be allowable if rewritten in independent form, incorporating the limitations of the base claim and any intervening claims.

Under the heading of "Other Issues" (Appeal Brief, pages 253-254), Appellant states that he does not concede that Ginsberg, Epstein, Coughlan, or any other art with a publication or priority date within one year prior to Appellant's priority date as prior art. Examiner replies that the Patent Office is surely not bound by Appellant's "refusal to concede"; Appellant could have submitted an affidavit or affidavits under 37 CFR 1.131 in an effort to establish that he had possession of the invention at some time prior to the priority date, but did not do so. In the absence of such affidavits, it is proper for the Patent Office to presume the date of Appellant's invention to be the priority filing date. Furthermore, affidavits could establish the date of invention with accuracy, and might give Appellant a date earlier than the filing date, but not a whole year earlier. If Appellant had possession of the invention some time before the relevant filing date, the question of whether Appellant had possession of the invention *more* than one year before the filing date arises, in which case problems could ensue regarding possible failure to exercise diligence in reducing the invention to practice, or even public use or sale of the invention more than one year before the filing date. In any event, Examiner has no duty to presume, in the absence of affidavits or evidence, that Appellant had possession of the claimed invention precisely one year before the priority filing date.

Appellant further defends the length of his Response (described by Examiner as having "lengthy and repetitive arguments") and apologizes for the length of his Appeal Brief. Appellant describes the lengthy Response as necessitated by Examiner's lengthy first Office Action (described by Appellant as having "many misunderstandings and inconsistencies"). Appellant writes that he "paid the PTO fees and is entitled to the

examination that was paid for." Examiner is entirely in agreement that Appellant was entitled to the examination that was paid for, and also entitled to traverse any rejections that Appellant believed to be in error, and to set forth his reasons for traversal at all requisite length. However, when the same issues are raised by different claims, Examiner believes it best to set forth the basic argument once, and note that the argument that applies to one claim applies to other claims as well, insofar as the other claims are parallel. Examiner leaves it to others who have perused Appellant's 288 page Appeal Brief to decide whether Appellant has been prolix beyond necessity.

In conclusion, Examiner believes Appellant's claims to have been properly rejected as unpatentable over Ginsberg, and further in view of various other prior art documents used in making rejections, and in view of proper takings of official notice, which were supported by actual prior art adduced in response to Appellant's challenges. (An exception is made for claims 238-241, which, as noted above, would be allowable if rewritten in proper independent form, for the same reasons as allowed claims 76-79.) Rejections have been made, and Appellant's arguments have been answered.

For the above reasons, it is believed that the rejections should be sustained.

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Respectfully submitted,

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November 15, 2002

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